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NEW YORK STATE

GRADE EXAMINATION QUESTIONS

REVISED EDITION
1912-1916

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New and Revised Edition, 1912-1916

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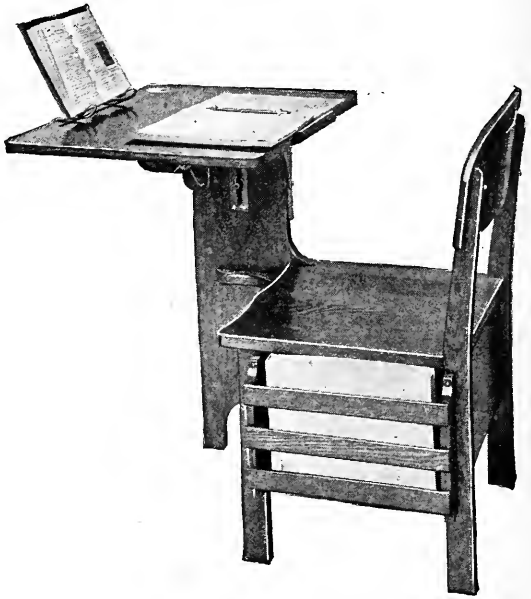

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GRADE
EXAMINATION QUESTIONS

FOR

FIFTH, SIXTH AND SEVENTH GRADES

OF THE

Elementary Schools of New York State

1910—1916

BASED UPON

THE ELEMENTARY SYLLABUS

Arithmetic, Geography, Nature Study and Agriculture

SECOND AND REVISED EDITION

Compiled and Published by the
Grade Examinations Committee of the New York State
Association of District Superintendents

1917

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This Compilation of Examination Questions presents, in concrete form, the work of the Grade Examination Committee of the State Association of District Superintendents for the past six years. These questions have been used in all parts of New York State and have been commended by village and district superintendents, and by principals and teachers everywhere.

They are published for the benefit of teachers and others in the earnest hope that they may be found useful in advancing the interests of Elementary Education

JAMES S. COOLEY, M. D.,
ALBERT J. FIELDS, B. S.,
MRS. JANE HARING WHITEHEAD,
JAMES WINGATE, B. S.,
Grade Examination Committee.

January, 1917.

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MAR 20 1917

Grade Examination Questions

ARITHMETIC—MENTAL TESTS

SEVENTH GRADE

Question 1

a 16 is what per cent of 64?

b What is the interest on $120 for 3 years at 5%.

c A man had 160 tons of hay. After selling 25% how many tons had he left?

d How many pen knives at $.25 each can be bought for $4?

e What is 2-3 of 180?

Question 1

a A man receives $15 a week. He spends $12. How much will he save in 5 weeks?

b A boy sells 8 quarts of chestnuts for 80 cents. At this rate what would he receive for a bushel?

c One-half pound of pepper costs 15 cents. What is the cost of ¼ pound?

d A boy bought papers at the rate of 4 for 6 cents and sold them for 2 cents each. What per cent did he gain?

e A ton of coal costing $3.50 is sold for $7. What is the per cent of gain?

Question 1

a In 10 gallons how many pints are there?

b Find the cost of 60 bushels of apples at 33 1-3 cents per bushel.

c The sum of two numbers is 55. One of the numbers is 19. What is the other?

d A man earns $18 in 12 days. At this rate how much can he earn in 20 days?

e If I pay 6 cents for the use of one dollar for a year, how much should I pay for the use of $50 for two years?

Question 1

a 30 is what fraction of 240?

b How many square yards in a walk 120 feet long and 3 feet wide?

c Find the interest on $250 for 2 years at 4%.

d A flock of hens numbered 84. The owner sold 42 of them. What per cent did he sell?

e A man left his daughter $3000 which was 1-3 of his property; find the value of his property.

Question 1

a What per cent of 18 is 6?

b At the rate of 3 pears for a nickel, how many pears can be bought for $1?

c If ¾ of a pound of candy costs 30 cents, what is the cost of one puond?

d Ethel failed on 2 of the 10 questions in her arithmetic. What per cent did she answer correctly?

e At $1.20 a day how much will a man earn in ¾ of a day?

Question 1

a How many sq. ft. in a rectangle 4 ft. by 6 ft.?

b What is 6% of $125?

c If ¾ of a pound of candy costs 24 cents what will ½ of a pound cost?

d A man pays $12.50 taxes on a valuation of $1250.00. What is the rate of per cent?

e What will be the cost of 44 cows at $75 each?

Question 1

a How many eggs in 6½ dozen?

b Find 2½% of 100.

c What is the interest of $50 for 2 years at 5%?

d How many yards of carpet one yard wide will be required to cover a floor 15 feet by 12 feet?

e What will it cost to excavate a cellar 24 feet long, 18 feet wide and 6 feet deep at $.25 a cubic yard?

Question 1

a What is 2% of $450.

b What will be the cost of a dozen oranges if ¼ of a dozen costs 10 cents?

c What is the interest on $100 for 1 year at 5%?

d At 33 1-3 cents a bushel find the cost of 6 bushels of apples.

e ¾ — 1-2 = ?

Question 1

a Find 87½% of $240.

b 66 2-3 cents is what part of a dollar?

c If 4-5 of an estate is valued at $4800, find the value of the entire estate.

d A boy solved 20 problems out of his lesson of 25. What per cent did he solve?

e What is the interest on $75 for 2 years at 6%?

Question 1

a 15 is what per cent of 75?

b What is the interest on $30 for one year at 5%?

c How many square feet in the floor of a room 10½ feet by 14 feet?

d Find 3½% of $200.

e An automobile was driven 60 miles in 2½ hours; what was the average rate of speed an hour?

Question 1

a How many hours in 480 minutes?

b How many square rods in ¼ of an acre?

c A boy buys papers at the rate 15 for 10 cents and sells them at one cent each; how much does he make on each paper?

d From 34½ subtract 20¼.

e What is the interest on $50 for one year at 5%?

Question 1

a What is 2-5 of $25?

b 6 eggs is what part of a dozen and a half?

c If 2½ pounds of butter cost $.75, what will 5 pounds cost?

d What is the interest on $100 for 2 years at 5%?

e A man bought a cow for $45 and sold her for $60; what was the gain per cent?

SIXTH GRADE

Question 1

a What is ¾ of 25?

b What will be the cost of 44 barrels of apples at $2½ per barrel?

c At 40 cents a pound how much tea can be purchased for $1?

d Find 33 1-3 per cent of $6.

e Add 23467
76532
31234
48673
51326

Question 1

a What is ⅝ of 100?

b At 10 cents per hour how much will 3 boys earn in 4 hours?

c 33 1-3 per cent of an apple crop consisted of 690 barrels of Baldwins; the remainder consisted of Northern Spies. How many barrels of Spies were there?

d After paying 25 cents a pound for 5 pounds of steak how much change should you receive from a 2 dollar bill?

e Add ½ and ¼.

Question 1

a What is ⅝ of 100?

b Add 2⅜ acres and 2¼ acres.

c A boy has 56 chickens and sells ¼ of them. How many does he sell?

d How many sq. ft. in a room 16 ft. by 10 ft.?

e Find 5% of $40.

Question 1

a What part of a dollar is 87½ cents?

b 15 is 3-5 of what number?

c 5% equals how many hundredths?

d How many minutes are there in 1½ hours?

e A dealer bought a horse for $200 and sold it at a profit of 10%; how much did he make?

Question 1

a What part of an hour is 15 minutes?

b Write as per cent 25-100.

c A man bought a cow for $60 and sold her for $75; what fractional part of the cost did he gain?

d How many cents in ⅜ of a dollar?

e A boy walked a mile in 16 minutes; how long will it take him to walk 3¾ miles?

Question 1

a What number is 2-3 of 324?

b What is the interest on $50 for 2 years at 4%?

c Find the cost of 2½ pounds of tea at $.60 a pound.

d Add 2¾ pounds and 1 1-12 pounds.

e How many eggs in 3½ dozen?

Question 1

a What will a peck of potatoes cost at one dollar a bushel?

b 12 is 2-3 of what number?

c What will 2½ pounds of coffee cost at 30 cents a pound?

d If a desk is bought for 18 dollars and is sold at a gain of 25%, what is the gain?

e A dealer pays 5 cents a quart for milk and sells it for 8 cents. How much money does he make on 2 gallons?

Question 1

a A boy has 45 ducks and sells 1-9 of them. How many has he left?

b If 3 oranges can be bought for 10 cents, how many will 30 cents buy?

c A girl has a dime, a quarter and a dollar bill. How much money has she?

d If 300 girls took an examination in arithmetic and 45 failed, what per cent of the whole number failed?

e In a class of 40 boys 5% were absent. How many boys were present?

Question 1

a 15 divided by 3-5 equals?

b How many quarts in ten bushels?

c What is 10% of $792?

d 1-3 of a boy's money is $15; find the entire amount.

e Add 67835
32164
43267
12345
87654

Question 1

a If 4 chairs cost $8, how many chairs can be purchased for $80?

b 60 is 20% of what number?

c What is the interest on $100 for 2 years at 6%?

d 21 is 3-5 of what number?

e A watch cost $32 and was sold at a gain of 25%. What was the gain?

FIFTH GRADE

Question 1

a How many cents in 1-3 of a dollar?

b A milkman bought 3 cows for $120. How much was paid for each cow?

c What is 2-3 of 18?

d A farmer sold 40 quarts of milk; how many pints did he sell?

e A boy walked ½ mile in 10 minutes. At the same rate how long would it take him to walk 6 miles?

Question 1

a How much is ¾ of $4?

b 10 is ½ of what number?

c John walks 15 miles and rides 7. How far does he travel?

d If 3 oranges cost 9 cents, how many oranges will 15 cents buy?

e How many feet are there in 60 inches?

Question 1

a How many cents in 1-5 of a dollar?

b A trustee paid $24 for 8 desks. How much was this apiece?

c If 10 pounds of corn will plant an acre, how many pounds will be needed to plant 25 acres?

d How many eggs in 4 dozen?

e At 10 cents a quart what is a half bushel of berries worth?

Question 1

a What is ⅛ of 100?

b 8 is 2-3 of what number?

c If 1-3 of a pound of sugar costs 2 cents, what will a pound cost?

d At $.20 a pint what is a quart of cream worth?

e A boy has a quarter, a dime, a nickel and a cent; how much money has he?

Question 1

a How many minutes in ¼ of an hour?

b At 7½ cents per yard what will 8 yards of cloth cost?

c A lady bought 40 quarts of cherries. How many pecks did she buy?

d 33 1-3 cents is what part of a dollar?

e A girl purchased 4 spools of thread at 5 cents a spool and a paper of needles at 10 cents. How much change should she receive from a 50 cent piece?

Question 1

a What is ⅝ of 72?

b 20 is 2-3 of what number?

c How many days are there in 6 weeks and 2 days?

d At 5 cents a quart what is a gallon of milk worth?

e A boy sold from his garden 3 bunches of onions at 5 cents a bunch and 2 dozen ears of corn at 10 cents a dozen. How much money did he receive?

Question 1

a How many cents in 4-5 of a dollar?

b In 8 yards how many feet?

c If 1-3 of a number is 24, what is the number?

d A bushel of berries may be bought for $3.20; find the cost of 7 quarts at the same rate.

e How many eggs in 3½ dozen?

Question 1

a How many quarts in 3 pecks 1 quart?

b What is 5-6 of $36?

c How many pounds in 3 tons?

d If 3 cords of wood cost $12, what will 1 cord cost?

e From a school of 20 pupils 5 were absent. What fractional part of the whole number was present?

Question 1

a How many minutes in 2 hours?

b 8 is 2-3 of what number?

c Find the cost of 30 pounds of butter at $.33 1-3 a pound?

d Three quarts of berries cost $.27; find the cost of 1 quart?

e A boy found a nest of 18 eggs; how much were the eggs worth at 30 cents a dozen?

Question 1

a What part of 24 is 8?

b How many ounces in 2 lb 4 oz. of sugar?

c Find the cost of 45 lb of coffee at $.33 1-3 a pound.

d How many dimes in five dollars?

e How many quart bottles are needed to bottle 4 gallons of milk?

Question 1

a What part of a foot is 8 inches?

b 18 is 2-3 of what number?

c What will 30 yards of linen cost at $.66 2-3 a yard?

d A trustee paid $30 for 12 school desks; how much did each desk cost?

e Find 33 1-3% of 327 acres.

Question 1

a ½ + 2-3 = ?

b Find 33 1-3% of 369.

c How many feet of fence are needed to inclose a chicken park 3 rods long and 2 rods wide?

d What is the interest on $400 for 2 years at 4%?

e If ¾ of a ton of coal costs $4.50, what will a ton cost?

Question 1

a What is 2-5 of 40?

b How many cents in ¼ of a dollar?

c How many eggs in 3½ dozen?

d Write .75 as a common faction.
e ⅜ + ¼ ?

June — 1916

SEVENTH GRADE

1 Mental test.
2 Copy and add the following:

81963
47056
23455
74632
90186
48903

(No credit is to be allowed unless the answer is correct.)

3 Define *three* of the following and give an example of each: per cent, denominate number, common fraction, mixed number.

4 Express the following decimals as per cents: .50, .10, .05, .18, .40.

5 *a* Find 16 2-3 per cent of $480.

b 250 pounds is what per cent of a ton?

6 A farmer sold 66 2-3 per cent of his crop of potatoes and had 200 bushels left; find the number of bushels he raised and the number he sold.

7 Discounts of 15%, 10% and 2% were allowed on a bill of machinery listed at $540; find the net cost of the machinery.

8 Find the interest on $320 for 2 years and 3 months at 5%.

9 In a dairy of 20 cows each cow averaged daily 40 pounds of milk, testing 3.8% butter fat. Find the value of the butter fat produced in the month of May at $.30 a pound.

10 During the month 3-7 of a school of 35 pupils deposited $22.50 in a school savings bank. What was the average amount deposited by each?

11 How many rods between the diagonally opposite corners of a rectangular field 40 rods long and 30 rods wide?

January — 1916

1 Mental test.
2 Copy and add the following:

54321
37865
68479

23657
85769
35732
53468

(No credit will be given unless the answer is absolutely correct.)

3 Define *two* of the following: decimal fraction, percentage, interest, linear measure.

4 Express the following per cents as decimals: 10%, 125%, ½%, 5%, 3½%.

5 If 5½ tons of coal cost $35.75 what will 8 tons cost at the same rate?

6 What is the interest on $430 for 2 years and 6 months at 5½%?

7 How many rods of fence will be required to inclose a square field containing 10 acres?

8 July 1, 1915, a boy, having earned $60, deposited it in a savings bank paying 4% interest, compounded semiannually; how much money will he have to his credit July 1, 1917?

9 Draw on the Second National Bank of New York your check for $25.45, in favor of your teacher.

10 A farmer's dairy produced 25,875 pounds of milk in the month of September, testing 3.4% butter fat; find the value of the butter at $.28 a pound.

11 If a post 4 feet high casts a shadow 10 feet in length, what is the height of a flagpole that casts a shadow 95 feet in length at the same time? Solve by proportion.

June — 1915

1 Mental test.

2 *a* 374.65 × 2.5 = ?

b 37 2-5 — 19⅞ = ?

(No credit is to be given unless the work is absolutely correct.)

3 *a* $42 is what per cent of $1260?

b 27 is what fractional part of 351?

4 Express the following fractions as per cents: 1-3, ⅞, 4-5.

5 What is the amount of $735 with interest at 6% for 1 yr. 9 mo.?

6 Write the table of cubic measure.

7 What will it cost to insure a house valued at $3300 for 2-3 of its value at 2¼%?

8 A boy deposits $3 in a school savings bank paying 3½% interest. How much will he have to his credit in the bank at the end of four years?

9 If one gallon of paint is required to cover 250 sq. ft. of surface, how many gallons will be needed to paint one side of a tight board fence 500 ft. long and 3½ ft. high.

10 How many pounds of milk containing 4 1-5% butter fat will be required to yield 84 pounds of butter fat?

11 Write your check for $65.35 on the Commercial Bank of Albany, payable to Leslie Smith.

January — 1915

1 Mental test.

2 (*a*) Divide 8.29719 by .153. (*b*) 183 ÷ 45¾ = ? (Five credits are to be given to each answer if correct.)

3 Define percentage, rate, base.

4 Express decimally *each* of the following: 25%, ½%, 3 2-5%, 5%, 125%.

5 *a* How many cords of wood in a pile 32 ft. long, 4 ft. wide and 4 ft. high?

b How many feet in ½ mile?

6 You borrow $125 of John Smith for one year at 6%. Write your note for this transaction.

7 Find the diagonal of a grange hall that is 68 ft. long and 51 ft. wide.

8 A certain school district has an assessed valuation of $98,120 and the amount to be raised by tax is $490.60. Find the rate of taxation.

9 What is the interest on $458,75 for 3 yrs. 5 mos. at 5%?

10 In a school of 45 pupils 3-5 are under ten years of age. Find (*a*) the number of pupils over ten years of age, (*b*) the percentage this number is of the whole number of pupils.

11 A farmer delivered at a factory 5684 pounds of milk testing 3.3% butter fat. How many pounds of butter fat did the milk contain and what was its value at $.35 a pound?

June — 1914

1 Mental test.

2 Copy and add:

15689
32456
56789
43210

98765
25783
12345
76543

(No credit is to be given unless answer is correct.)

3 Define insurance, rate, taxes.

4 Write in words (*a*) 2509.125, (*b*) 5⅞.

5 At 95 cents a bushel how much is the grain worth that fills a bin 10 ft. by 9 ft. by 4 ft.?

6 Two cows produce each 4500 lb of milk in a year, the one testing 3.2% butter fat, the other 5.4% butter fat. How much more butter fat does the one cow produce than the other?

7 A rope stretched from the top of a 28 foot pole just reaches the ground 21 ft. from the foot of the pole. Assuming the rope to be straight, how long is it?

8 A farmer shipped 250 barrels of apples to a commission agent who sold the fruit for $1.75 a barrel. After deducting his commission of 5% and $15 for cartage, how much did he remit to the farmer?

9 A man bought a horse for $200 and sold him for $175; find the loss per cent.

10 Make a receipted bill of the following items: John Brown of Buffalo sold you today the following items: 3 yards of silk @ $1.25 per yd., 1 pattern @ $.15, 7 yards of muslin @ $.10 per yd.

11 Find the amount and interest on $1440 from September 20 to the following July 1st at 6%.

January — 1914

1 Mental test.

2 *a* 736594 × 309 = ?

b 96096 ÷ 231 = ?

3 Define rate, interest, percentage.

4 *a* 26 2-3 — 17½ = ?

b 5-6 × 4-15 × 1¾ = ? [Solve by cancellation.]

5 Express the following as per cents: .50, .33 1-3, 1.33 1-3, .05, ¼.

6 A man paid $875 for an automobile and sold it at a loss of 40%; what did he sell it for?

7 If 2-3 of a farm is worth $1800 what is ¾ of it worth?

8 Suppose that you borrow $250 of John Brown and give your note payable in 6 months; write the note.

9 If you deposit $125 in a savings bank paying 4% credited semiannually, how much money will you have to your credit at the end of two and one-half years?

10 If 18 yards of carpet 1 yard wide are required for a room, how many yards 27 inches wide will it require to cover the same floor? [Solve by proportion.]

11 Find the amount of butter fat from a cow that produced 6590 lbs. of milk last year, testing 4 1-10%.

June — 1913

1 Mental test.

2 Copy and add:

54321
63578
45934
28365
78230
12359

(No credit will be given unless the work is absolutely correct.)

3 Express *each* of the following decimally: ½%, 16 2-3%, 5%, 50%, 1¾%.

4 *a* Write the table of linear measure.

b Write the table of square measure.

5 *a* 25 1-3 — 11¾ = ?

b Write in words 1257.25.

6 If ⅝ of a farm is worth $2400, what is the value of the entire farm?

7 Find the square root of 3364. *Or*

Find the missing term in the following proportion: 6 : 24 = 8 : x.

8 A commission merchant sold 184 baskets of peaches at $1.25 per basket. Find his commission at 5%.

9 A farmer can buy a cow for $45 cash or for $48 on a year's time. If money is worth 6% which is the better bargain and how much?

10 A note for $640 was given Jan. 1, 1912, and the amount of interest due June 1, 1913, was $54.40; what was the rate?

11 Draw in favor of John Smith your check for $175 on the Security Trust Company of Rochester.

12 A plot of ground is 80 feet wide and its area is 32,000 square feet. Find the length of this plot. Illustrate by a diagram.

January — 1913

1 Mental test.

2 Define interest, base, rate, percentage.

3 Express *each* of the following decimally: 66%, 5%, 132%, 16%, 40%.

4 What is the interest on $47.50 for 3 years 5 months at 6%?

5 If 75 bushels of wheat cost $67.50 what will 320 bushels cost?

6 A poultryman had 1-5 of his hens in one flock, ¼ in another, and the remainder, which was 88, in a third, how many hens had he?

7 A boy deposits $24 in a savings bank paying 4% interest credited semiannually, how much money would this amount to at the end of 2 years?

8 A man bought a piece of property for $2400 and sold it at a loss of 12½%. What was the loss?

9 You owe John Doe $5.25. Write your check on the National Commercial Bank of Albany in payment of the sum.

10 A butter factory patron delivered 6824 pounds of milk testing 3 3-5% butter fat. How many pounds of butter fat did the milk contain and what was the value of the butter fat at $.30 a pound?

11 If you know the amount given for an article and the amount for which it is sold, how can you find the per cent of loss or gain?

December — 1912

1 Mental test.

2 *a* 15 5-7 divided by 3 2-7 equals?

b ¾ × ⅞ ×1 1-3 × 12 × 6 2-3 equals?

3 Express *each* of the following as per cent: 5, 2-3, 1 1-2, 40, 16 2-3.

4 If 4½ tons of hay cost $72 what will 17 tons cost at the same rate?

5 Find the amount of $675 for 3½ years at 4%.

6 Find the length of each side of a square field containing 1936 square rods. Draw a diagram of the field.

7 A contractor sold a house and lot for $4500, which was 25% more than the cost. Find the cost.

8 Make out a check for $125.50 on the National Commercial Bank of Albany, dated to-day and payable to the order of your teacher.

9 The threshing bill of two farmers is $45, one having 525 bushels of wheat and the other 600 bushels. What part of the bill should each pay?

10 In a certain cheese factory a vat containing 5600 lbs. of milk contains 252 lbs. of fat; what is the per cent of fat?

11 How many yards of carpet 3 feet wide will be required for a room 16 feet long and 11 feet wide?

June — 1912.

1 Mental test.

2 Define concrete number, abstract number, cash discount.

3 *a* Write the table of avoirdupois weight.

b Write the table of square measure.

4 If 7½ tons of hay cost $120, how many tons can be purchased for $88?

5 Find the amount of $175 for 2 years 5 months 12 days at 5%.

6 A plot of ground is 160 feet wide and its area is 52,800 square feet. Find the length of this plot. Illustrate by a diagram.

7 What is the difference between a discount of 35% on a bill of $400 and two successive discounts of 20% and 15%?

8 A man sold his farm for $6230, thereby gaining 40% of the cost. Find the cost and the gain.

9 The assessed valuation of a common school district is $35,000 and the tax to be raised is $175. Find the tax of a man whose farm is assessed for $4000.

10 Find the cost of digging a cellar 20 feet long, 15 feet wide and 9 feet deep at $.45 a cubic yard.

11 A commission merchant was paid $27 for selling 300 barrels of flour at $4 per barrel. What was his rate of commission?

12 A cow averages 40 pounds of milk for each day during April. The butter fat test is 3½%. How many pounds of milk and how many pounds of butter fat does this cow produce during the month?

January — 1912

1 Mental test.

2 Define bank discount, interest, base.

3 *a* Express decimally: 10%, ½%, 3⅞%, 25%, 125%.

b Express .66 2-3 in per cent and as a common fraction.

4 A farmer exchanged 6½ lbs. of butter for 4½ lbs. of tea. If the tea was worth 60c a pound what value per pound did the farmer receive for his butter?

5 *a* Find the interest on $25 for 8 months at 6%.

b Write a negotiable promissory note for $50 with yourself as maker and your teacher as payee.

6 A lawyer collected $385 for a client. How much should he remit after deducting his charge of 5%?

7 A 60 day note for $1500, with interest at 6%, is discounted 30 days after date. Find the proceeds.

8 A school society deposited $45 in a savings bank paying 3% interest credited semiannually. How much money can the society draw at the end of 1½ years?

9 How many rods of ditch will it take to run diagonally across a square field one side of which is 40 rods?

10 A farmer sowed 4 bushels of buckwheat on 4 4-5 acres. At the same rate what quantity of seed is required for 13½ acres? [Solve by proportion.]

11 A man sold a house and lot for $4500, which was 25% more than it cost him. Find the cost.

12 Find the yield of milk and the yield of butter fat for the year from the cow whose record is as follows:

	May	June	July	Aug.	Sept.
Pounds of milk..	750	756	725	650	675
Test	4.5%	4.4%	4.2%	4.1%	4.2%
	Oct.	Nov.	Dec.	Jan.	Feb.
Pounds of milk..	680	614	620	520	420
Test	4.5%	4%	3.7%	3.5%	3%

December — 1911

1 Mental test.

2 *a* 17 1-3 — 11 2-7 = ?

b 819 × 5-6 × 1¾ = ?

3 If ¾ of the value of a farm is $900, what is the value of ⅞ of this place? [Solve by analysis.]

4 What will be the cost of carpeting a room 18 feet long and 24 feet wide with carpet 27 inches wide at $1.50 per yard?

5 How many cords of wood in a pile 20 feet long, 10 feet high and 4 feet wide?

6 How many rods of fence will be required to inclose a square lot containing 1 3-5 acres?

7 If the cost of keeping a cow for a year is $32.50 and she produces milk and butter to the value of $65, what is the per cent of profit to her owner?

8 Find the interest on $275 for 3 years 6 months at 5%.

9 How long will it take $220 to amount to $253 at 6%?

10 A commission merchant sold 840 barrels of apples at $2.45 a barrel. Find his commission at 5%.

11 *a* Draw, in favor of your teacher, your check for $50 on the First National Bank of Chicago.

b Explain the difference between a check and a promissory note.

12 A father, on his daughter's 19th birthday, January 1st, invested for her $250 in a savings bank paying 4% interest compounded semiannually. What sum could she draw on her twenty-first birthday?

13 Find the proceeds of a 60 day note discounted to-day at 6%.

June — 1911.

1 Mental test.

2 Add

177	2-3
13	3-4
5	7-8
84	1-10
345	2-5

3 *a* Give the table of linear measure.

b Give the table of dry measure.

4 *a* How many shillings in a pound or sovereign?

b Express the value of one pound in United States money.

5 Fill in the following blanks with fractions and decimals:

10 cents =	of a dollar or	(decimal)
30 cents =	of a dollar or	(decimal)
40 cents =	of a dollar or	(decimal)
75 cents =	of a dollar or	(decimal)
66 2-3 cents =	of a dollar or	(decimal)

6 *a* Find the area of a triangle whose base is 4.5 feet and whose altitude is 4 feet.

b The base of a pail is 10 in. in diameter; what is the circumference of the base?

7 If 12½ bushels of apples cost $5 how much will 15¾ bushels cost?

8 Express in bushels the volume of a bin 6 ft. by 4 ft. by 3 ft. 6 in., allowing 2150 cu. in. to the bushel.

9 Write a promissory note for $400, dated August 1, 1910, payable with interest to James Smith three months after date.

10 How many cu. ft. in a log 16 ft. long, the average diameter being 1 ft. 11 in.?

11 A man delivered to a butter factory 7808 lb. of milk that

tested 3.4% butter fat. How much butter fat did he deliver and what was its value at $.26½ per lb.?

12 At $6 per cord what is the value of a pile of wood 240 ft. long, 6 ft. high and 4 ft. wide?

13 The assessed valuation of a certain school district is $25,000; the tax to be raised is $150. How much is the school tax of a man whose farm is assessed for $1500?

January — 1911

1 Define base, rate, percentage.

2 689425 × 76 = ?

No credit is to be given unless the answer is absoultely correct.)

3 Express the following decimals as per cents: .50, .05, .45, 1.23, .33 1-3.

4 *a* What is the interest on $14 for 7 months at 6%?

b Write a check for $50.75 on the First National Bank of Albany.

5 A commission merchant sold poultry to the amount of $680; what was his commission at 2½%?

6 The list price of a piano is $45 with discounts of 20% and 10%; find the net cost.

7 A man deposited in the bank $3000, which was 1-3 of his money; he invested 1-6 of his money in land. What is the value of the land?

8 A man paid $300 for a horse and sold it for $350; find his gain per cent.

9 John Smith borrows $75 of you and gives his note payable in three months; write the note.

10 How many yards of carpet 27 in. wide will be required to cover a room 30 ft. by 27 ft?

11 Find the cost of digging a cellar 30 ft. long, 18 ft. wide and 6 ft. deep at 20 cents a cubic yard.

12 A girl deposited $25 in a school savings bank paying 3% interest credited semiannually; how much money could she draw at the end of two years?

ARITHMETIC

SIXTH GRADE

June — 1916

1 Mental test.

2 Divide 6250 by 2.5.

(No credit is to be allowed unless the answer is correct.)

3 *a* From 189 7-9 take 143½.

b 2½ × 7 1-3 × 3 1-3 × 3 3-10 = ?

4 Define *two* of the following: base, interest, denominator.

5 Express *each* of the following (*a*) as a common fraction, (*b*) as a decimal: 50%, 10%, ½%, 6¼%, 2%.

6 Find the income from 12 acres of oats yielding 38 bushels to the acre at $.55 per bushel.

7 The law of New York State requires 200 cu. ft. of air space for each pupil in the schoolroom. How many pupils may be seated in a room 20 ft. by 30 ft. by 12 ft.?

8 Write a negotiable promissory note for $250 due in one year with interest at the legal rate, and with John Brown as payee.

9 How much is the interest at 6% on a note for $257.81, dated March 2, 1915, and payable to-day?

10 Find the cost of a concrete walk, 160 feet long and 5½ feet wide, at 18 cents per square foot.

January — 1914

1 Mental test.

2 *a* Multiply 46481 by 93.

b Divide 234.95 by 175.

(No credit will be given unless the answer is absolutely correct.)

3 Write in words *each* of the following: ⅞, 1 5-6, 325.8001, .25, 18%.

4 Define and give an example of any *three* of the following: rate, denominate number, base, mixed number, common fraction.

5 *a* What fractional part of 90 is 15?

b 63 is 14% of what number?

6 A boy earned $48 during the summer. He spent 1-3 of this for clothing and 1-12 for books and put the remainder into a school bank. How much money did he put into the bank?

7 How many yards of carpet a yard wide will be required to carpet a room 18 feet long and 15 feet wide?

8 In one year a cow gave 6324 pounds of milk testing 3¾% butter fat; find the value of the butter fat at $.32 a pound.

9 Make out and receipt in proper form a bill of the following items, inserting the name and address of a purchaser and of a dealer:

10 lb sugar @ 7 cents a lb
2½ lb butter @ 32 cents a lb
3 doz. eggs @ 3 cents each
2 lb coffee @ $.35 a lb

10 A man sold 324 bushels of wheat, which was 3-8 of his entire crop; how many bushels did he raise?

11 Find the cost of digging a cellar 21 feet long, 15 feet wide and 9 feet deep at $.15 per cubic yard.

June — 1915

1 Mental test.

2 Divide 78.351 by 6.37.

(No credit is to be given unless the work is absolutely correct.)

3 Define *two* of the following: decimal fraction, cancellation, even number.

4 *a* Multiply 12¼ by 4.

b From 7 2-3 take 6¼.

5 If $22.75 will buy 3½ tons of coal, what will 12 tons cost?

6 19 is what fractional part of 57?

⅞ of a number is 203. Find the number.

7 A rectangular farm containing 80 acres was 160 rods long. How wide was the farm?

8 Find the interest on $450 for 2½ years at 5%.

9 Write a promissory note for $125 bearing legal interest, payable one year from date, with yourself as maker and your teacher as payee.

10 A man bought machinery to the value of $250 and was given discounts of 10% and 5% off. Find the amount of his bill.

11 An agent sold 50 pails of butter each containing 30 pounds at $.35 a pound. After deducting his commission of 5% how much money should he remit to the owner?

January — 1915

1 Mental test.

2 Multiply 843.25 by 2.36.

(No credit is to be given unless the answer is absolutely correct.)

3 Define *three* of the following: denominator, mixed number, common fraction, even number.

4 Solve *a* 16 4-5 — 4 2-3 = ?

b 75 ÷ 13 4-5 = ?

5 *a* 6336 is 60% of what number?

b What per cent of $925 is $46.25?

6 Write in words: (*a*) 325.05, (*b*) 16 2-7, (*c*) .165.

7 How many cubic feet of air in a room 12 feet square and 9½ feet high?

8 A man sold ¾ of his apples for $1200. Find (*a*) the value of the entire crop, (*b*) the net profit, if the cost of production of the crop was ¼ of its value.

9 On November 1, 1914, you bought of Smith, Brown and Co. of New York, 25 pairs of hose @ $.20 a pair, 100 yards of carpet @ $.75 a yard and 5 dozen papers of hooks and eyes @ $.36 a dozen. Write, compute and receipt the bill in proper form.

10 A cow gave in one year 5234.4 pounds of milk testing 3½% butter fat. How much butter fat did she produce?

11 If 5-6 of a number is 695, what is the number?

June — 1914

1 Mental test.

2 *a* 78563 × 201 = ?

b 352408 ÷ 29 = ?

(No credit is to be given unless answer is correct.)

3 Define percentage, product, quotient.

4 Change the following per cent forms to equivalent common fractions: 25%, 3%, 10%, 5%, ¾%.

5 A farmer had 1000 bushels of oats and sold 65 per cent of them. How many bushels had he left?

6 A boy paid $30 for a bicycle and sold it at a loss of 20%. What was his loss? How much did he receive for the bicycle?

7 Find the interest on $750 for 4 years 3 months at 5%.

8 Find the net cost of a bill of farm machinery listed at $925 with discounts of 15% and 5%.

9 Write your note for $125 payable in 1 year at 6% making your teacher payee.

10 If a flock of hens are fed daily 4 lb of grain worth $2.00 per hundred pounds, how many dozen eggs sold at 25 cents per dozen will be required to pay for the grain fed in the month of March?

11 If the dimensions of a room are given how do you find the number of square feet of plaster required to cover the ceiling and wall?

January — 1914

1 Mental test.

2 Copy and add the following:

35685
64806
56425
57932
12345
87654

(No credit will be given unless the answer is absolutely correct.)

3 Write the following in figures and arrange in column form: five thousand three hundred sixty-five and one hundred twelve ten-thousandths; four hundred and three thousandths; eight and forty-nine hundredths.

4 *a* Express ½ as a decimal and as a per cent.

b Express 2-3 as a decimal fraction and as a per cent.

5 *a* What is 8 2-3 per cent of 624?

b 33 is 20% of what number?

6 A man saves 2-5 of his income, which is $1500 a year; how much does he spend?

7 Suppose that you purchase the following list of groceries from Driscome & Co., Albany, N. Y. Make out and receipt the bill for Driscome & Co.

20 lb sugar @ 5½c.
2 pineapples @ $.15 each
3 lb butter @ $.33 per lb
6 quarts of vinegar @ $.07 a qt.

8 If each day a cow gives 3½ gallons of milk testing 4 1-5% butter fat, how much fat does she produce in a week? (One gallon of milk weighs 8⅝ pounds.)

9 If 8 quarts of clover seed are allowed to an acre, what

will it cost to seed five acres when clover seed is worth $12 a bushel?

10 Find the cost of covering the floor of a kitchen 15 feet long and 12 feet wide with linoleum at 85 cents a square yard.

June — 1913

1 Mental test.

2 Solve by cancellation the following:

a $25\frac{1}{2} \div 6 = ?$

b $7\frac{1}{2} \times 5\text{-}6 \times 24 \times 4\text{-}5 = ?$

3 Define *three* of the following: fraction, commission, aliquot part, interest, multiplicand.

4 Express *each* of the following decimals as per cents: .25, .33 1-3, .5, 1.40, .05.

5 *a* What per cent of $360 is $90?

b A man sold 50 hens which was 1-5 of his flock; how many hens were in the flock?

6 What is the interest on $560 for 3 years 6 months at 5%?

7 A commission merchant sold for a farmer 1000 pounds of butter at $.30 a pound. After deducting his commission of 5% he remitted the remainder to the farmer. Find (*a*) the merchant's commission, (*b*) the amount the farmer received.

8 Write a promissory note for $25 due in three months from date with your teacher as payee and yourself as maker.

9 A bill of goods is listed for $200 and sold at a discount of 30%. Find the discount and the net price of the goods.

10 During the month of June a cow had a daily average of 40 pounds of milk testing 3¾% butter fat. Find (*a*) the number of pounds of milk produced during the month, (*b*) the number of pounds of butter fat produced.

11 How many acres are there in a field 24 rods long and 20 rods wide?

12 Write the table of dry measure.

January — 1913

1 Mental test.

2 Multiply 576482 by 23.

(No credit is to be allowed unless the answer is absolutely correct.)

3 *a* Reduce 42-147 to its lowest terms.

b Change ¾ to a decimal fraction.

4 Express *each* of the following per cents as a decimal:
25%, 33 1-3%, 125%, 5%, ½%.

5 *a* What per cent of 280 is 70?

b Find 15% of 730.

6 How many square rods in a field containing 12 acres?

7 A farmer sells 25,120 pounds of milk to a creamery. This milk averages 4½% butter fat. Find the number of pounds of butter fat credited to him.

8 On Jan. 1, 1912, Chas. Reed bought of John Keep of Ithaca 25 yards of muslin @ $.12 a yard, 40 yards of carpet @ $.75 a yard and 2 pairs of lace curtains @ $3 a pair. Write, compute and receipt the bill in proper form.

9 A man sells 3½ tons of dried berries at $.20 a pound and deposits 2-5 of the amount received in a bank. Find the amount deposited in the bank.

10 If the dimensions of a bin are given, how do you find the number of bushels the bin contains?

11 Define *three* of the following: decimal fraction, rate, percentage, proper fraction.

December — 1912

1 Mental test.

2 Copy and add the following:

7832
356
4624
1003
6782
10

(No credit will be allowed unless the answer is entirely correct.)

3 Define *three* of the following: base, fraction, dividend, per cent.

4 Copy and complete the following:

		decimal fraction.	common fractions.
20%	=	?	?
12 1-2%	=	?	?
66 2-3%	=	?	?
5%	=	?	?
10%	=	?	?

5 Write in words: (*a*) 537.25, (*b*) .113, (*c*) 7⅝.

6 If ⅜ of a man's salary is $360 what is his entire salary?

7 Perform *each* of the following operations:

a 96 2-3 — 6⅞ *c* 400 + 6

b 235 — 15.12 *d* 125.6 + .04

8 A cow gives 6782 lbs. of milk testing 3½% butter fat; what is the value of the butter fat at $.28 a lb?

9 A school yard is 198 ft. by 132 ft. Find the number of rods of fence required to fence it on both ends and one side.

10 Tell how to find the number of yards required to carpet a room when the dimensions of the floor of the room are given.

11 Find number of square yards in a cement walk 4 ft. wide and 150 ft. long. What is the cost of the walk at $1.50 per sq. yd.?

June — 1912

1 Mental test.

2 8 2-3 ÷ 2-3 = ?

34 ÷ 4.25 = ?

12½% of 560 = ?

3 *a* In what time will $750 at 6% amount to $759?

b $140 loaned for 2 years yields $14. Find the rate.

4 If 2½ acres of land yield 750 bushels of beans how many bushels will 7½ acres produce at the same rate?

5 You owe Thomas Smith $125. Write your note for this sum making it payable in three months.

6 Find the net cost of an automobile listed at $1800, with trade discounts of 20% and 5%.

7 If 5-6 of a farm is worth $2500 what is the value of the farm? What is the value of 2-5 of the farm?

8 Six brothers owned equal interests in a farm. Five of them sold all of their interests for $3500. What was the farm worth?

9 A commission merchant sold 300 barrels of apples at $3.50 per barrel. What was his commission at 2½%?

10 Find the amount of $250 for 2 years 6 months at 5%.

11 How many yards of carpeting one yard wide must be purchased for a room 24 feet long and 14 feet wide?

January — 1912

1 Mental test.

2 Divide 27.8142 by 307.

(No credit is to be given unless all the work is absolutely correct.)

3 *a* Find 25% of 360.

b What is the number of which 10 is 25%?

c What per cent of $96 is $72?

4 *a* Change 1¾ pounds to ounces.

b Change 28 bu. 3 pk. to quarts.

c Change 5 sq. yd. to sq. ft.

5 *a* Express each of the following in per cent: .25, 2.50, .00½.

b Express each of the following as a decimal fraction: 35%, 33 1-3%, ½%.

6 Define *three* of the following: per cent, aliquot part, multiplication, base, factor.

7 Make out and receipt in proper form the following bill, inserting the name and the address of a purchaser and of a dealer:

10 lb. sugar at 7c
2 qt. berries at 11c
4 doz. eggs at 26c
5½ lb. butter at 32c

8 If 4½ tons of coal cost $27 what will be the cost of 3 tons at the same rate? [Solve by analysis.]

9 A grocer bought 8 bushels of potatoes at $.75 a bushel and sold them for $7.80. What per cent did he gain?

10 If a field of grain is a quarter of a mile long and 20 rods wide how much should be paid for cutting the grain at 75 cents per acre?

11 A man having an income of $1500 per year spent 48% of it. How much did he save?

12 A certain cow gives 4 gallons of milk per day. If the milk tests 4.5% how much butter fat does she yield per week? [One gallon of milk weighs 8⅝ pounds.]

December — 1911

1 Mental test.

2 Define *three* of the following: proper fraction, numerator, quotient, rate, aliquot part.

3 Write *each* of the following in words:

6720
856.02
36 2-3

4 *a* 84 is ⅞ of what number?

b 60 is 15% of what number?

c What fractional part of 36 is 24?

5 Change *each* of the following to an equivalent common fraction: 25%, 33 1-3%, 4%, 10%, .00½.

6 Write 5 aliquot parts of one dollar, giving in cents the value of each part.

7 How many square yards are there in the floor of a skating rink 45 feet long and 36 feet wide?

8 A farmer raised 150 bushels of potatoes from 4 bushels of seed. What per cent of the crop was the seed?

9 A man sold a piece of land at $90 per acre, thereby gaining 2-7 of the cost. How much did the land cost per acre?

10 A dealer buys fertilizer at $28 per ton and retails it at $1.90 a hundred pounds. How much does he gain on 35 tons?

11 If 12 quarts of seed beans are allowed to an acre what will be the cost of the seed used on 5 acres when beans are worth 75 cents a peck?

12 Find what it will cost a farmer to thresh his grain with the following items of expense:

324 bushels of oats at 2½ cents per bushel
750 bushels of wheat at 4 cents per bushel
900 pounds of coal at $4 per ton
180 bushels of rye at 6 cents per bushel
4 men at $1.50 per day for 1½ days

June — 1911

1 Mental test.

2 *a* Find ⅞ of 248.

b 70 is 14-15 of what number?

c 60 is 15% of what number?

3 *a* Reduce 10 rd. 3 ft. to in.

b Reduce 272 pk. to bu.

4 What fractional part of 100 is equivalent to each of the following numbers: 20, 16 2-3, 33½, 37½, 6¼, 25, 87½, 66 2-3?

5 Find the interest on $560 deposited in a bank for 6 years 3 months at 4%.

6 What is the cost of a bill of farming implements listed at $480, with discounts of 20% and 5%?

7 In what time will $180 at 5% yield $22.50 interest?

8 A commission merchant sold 320 barrels of apples at $3.50 a barrel and 16 barrels of sweet potatoes at $4.80 a barrel. Find his commission at 6%.

9 A man sold a horse for $225, thereby gaining 12½%. What was the cost of the horse?

10 State *five* essential points a promissory note should contain.

11 A man sold 5-9 of his crop of hay for $60. What was the value of his whole crop?

12 A well cultivated field produces 70 bu. of corn per acre and a weedy one only 35 bu. What is the loss per acre caused by weeds when corn is $.45 per bu.?

January — 1911

1 Copy and add the following: 9872, 27, 6923, 5234, 872, 2050.

(No credit is to be given unless the answer is absolutely correct.)

2 Define three of the following: denominator, rate, dividend, improper fraction, percentage.

3 Write the following in figures: five thousand one hundred twenty-five and one hundred thirteen thousandths; four hundred four and five hundredths; sixty-nine and five thousandths; seventy-eight and ninety-eight ten-thousandths.

4 *a* What is 12½ per cent of 850?

b 75 is 20% of what number?

5 Add

59 3-4
8 7-8
15 5-12
25 5-6

---

6 *a* Express ½ as a decimal and as a per cent.

b Express .33 1-3 as a common fraction and as a per cent.

c Express 20% as a common fraction and as a decimal.

7 Two-thirds of a number is 36; what is the number?

8 A man receives a salary of $1200 and spends 65% of it; how much does he save?

9 A cow gives in one year 5890.5 lb. of milk testing 3 2-5% butter fat; how much butter fat does she produce?

10 Find the cost at $.90 per square yard of constructing a stone road 16 ft. wide and 4 miles 2640 ft. long.

11 J. C. Smith bought of Kilmer & Son, Jan. 10, 1910, the following: 22 lb. of coffee at $.35; 3 lb. of tea at $.55; 4 lb.

raisins at $.12½; 10 lb. sugar at $.05½. Make out the bill and receipt it.

12 A man sold 480 bu. of wheat, which was ⅝ of his entire crop; how many bushels did he raise?

FIFTH GRADE

June — 1916

1 Mental test.

2 Copy and add

4706
5849
7687
5876
9643

(No credit is to be allowed unless the answer is correct.)

3 Add 15 2-3, 3¼, 23 5-6.

4 Write the table (*a*) of square measure, (*b*) of cubic measure.

5 Reduce *each* of the following to common fractions: .25, .05, .125.

6 If 5-6 of the value of a house and lot is $3600, find the entire value.

7 Make out and receipt in proper form a bill for the following goods, bought by you this day of Dey Brothers, Syracuse, New York:

6 yds. silk at $1.50 per yd.
1¼ yds. lace at $.80 per yd.
2 spools twist at $.05 each
2 doz. buttons at $.25 per doz.

8 A man bought potatoes at $.75 per bushel and sold them at $1 a bushel. His profit was $60. How many bushels did he sell?

9 How many bushels of wheat will a bin 10 ft. long, 8 ft. wide and 6 ft. deep contain? (1 bushel = 1¼ cu. ft.)

10 Write *five* aliquot parts of a dollar with their equivalent fractions.

January — 1916

1 Mental test.

2 Define proper fraction, improper fraction. Give an example of each.

3 *a* $5\frac{1}{4} \times 7\ 2\text{-}3 = \ ?$

b 8 2-3 — ¾ = ?

4 A farmer purchases 2 barrels of flour at $7.50 per barrel, 10 pounds of coffee at 32 cents per pound, 100 pounds of sugar at 6 cents per pound and 10 gallons of gasoline at 15 cents per gallon. He hands the dealer 3 ten dollar bills in payment. How much change should he receive?

5 Copy and complete the following:

1 cu. ft. = ? cu. in.
3 sq. ft. = ? sq. in.
36 in. = ? ft.

6 Write in words (*a*) 32 5-9, (*b*) 10.542.

7 Write *each* of the following as a decimal fraction:

¾, 1-5, 2½, 37 1-3, 5-6.

8 A wagon loaded with hay weighs 4200 pounds; if the wagon weighs 1200 pounds, what is the value of the hay at $15 a ton?

9 What will it cost to cement the floor of a cellar 18 feet by 27 feet at $1.30 per square yard?

10 A grocer buys potatoes at $.75 a bushel and retails them for $.25 a peck; how much does he gain on a bushel?

June — 1915

1 Mental test.

2 Multiply 4326 by 25.

(No credit is to be given unless the work is absolutely correct.)

3 Write in words (*a*) 127.45, (*b*) 3 5-6.

4 75 cents = what part of a dollar?
10 cents = what part of a dollar?
16 2-3 cents = what part of a dollar?
20 cents = what part of a dollar?
25 cents = what part of a dollar?

5 Write the table of dry measure.

6 If there are 24 tons of hay in a mow which is only 2-3 full, how many tons will the mow hold?

7 Write (*a*) a proper fraction, (*b*) an improper fraction. What is an improper fraction?

8 Write and receipt in proper form a bill for the following goods bought to-day by you from Smith and Jones of Troy, N. Y.:

15 lb sugar @ $.06 per lb
1½ lb butter @ $.40 per lb
18 lemons @ $.36 per dozen

9 How many bushels of potatoes can be put into a wagon box 10 ft. long, 3 ft. wide and 1½ ft. deep?

(1¼ cu. ft. = 1 bu.)

10 *a* Reduce 462 cu. in. to gallons.

b How many tons in 4500 pounds?

11 Define *two* of the following: denominator, common fraction, even number, numerator, integer.

January — 1915

1 Mental test.

2 Copy and add

5763
4236
4320
6437
2149

(No credit to be given unless the answer is absolutely correct.)

3 Express *each* of the following in cents:

3-4 of a dollar =
1-3 of a dollar =
1-8 of a dollar =
3-5 of a dollar =
1-6 of a dollar =

4 Define *three* of the following: odd number, decimal fraction, numerator, integer.

5 If 5-6 of a class numbering 36 pupils secure honor standings, how many pupils fail to secure honor standings?

6 *a* In 81 square feet how many square yards?

b How many cubic inches in a bushel of wheat?

c How many cubic inches in a gallon?

7 If 6.75 acres produce 189 bushels of wheat, how many bushels does one acre produce?

8 A flock of hens in one month produced 150 dozen eggs which sold for $.30 per dozen. During that month they ate 10 bushels of wheat costing $.95 per bushel and other grain costing $4.50. How much does the value of the eggs sold exceed the cost of the grain fed?

9 A floor is 15 feet long and 12 feet wide, how many yards of carpet will be required to cover it?

10 Reduce *each* of the following to an equivalent fraction of a lower denomination: 8-12, 16-24, 9-15, 45-72, 15-30.

11 *a* Change ½, 5-6, ⅜ to decimal fractions.
b Reduce 34 3-5 to an improper fraction.

June — 1914

1 Mental test.
2 *a* Reduce 132/156 to its lowest terms.
b Find a common denominator of ¾, 1-3, 5-6.
3 Copy and add

	3457
	1246
	7354
	6341
	2658

(No credit is to be allowed unless the answer is correct.)
4 *a* Subtract 5½ from 14¾.
b Multiply 6 2-3 by ⅞.
5 Copy and complete the following:

16½ ft.	=	?	yd.
2-3 of a dollar	=	?	cents
1 bu.	=	?	cu. in.
27 sq. ft.	=	?	sq. yd.
48 oz.	=	?	lb

6 If ¾ of a farm is worth $2400 what is the value of the entire farm?
7 If a peck of well selected corn will plant an acre, how many bushels will it take to plant a field 40 rods square?
8 A farmer exchanged 52 cords of wood worth $6.25 per cord for sheep valued at $5 per head; how many sheep did he get?
9 Reduce 3 T. 14lb 3 oz. to ounces.
10 Define *three* of the following: denominator, fraction, proper fraction, denominate number.
1 Mental test.
2 Copy and add

	1287
	5269
	4325
	8734
	6243
	1234

(No credit will be given unless the answer is absolutely correct.)

3 *a* Reduce 9 2-3 to an improper fraction.

b From 2-3 take 3-5.

4 Express the following as decimal fractions: three fifths, one half, five eighths.

5 Copy and complete the following:

Common fraction	Cents
1-8 of a dollar	?
7-10 of a dollar	?
1-20 of a dollar	?
3-8 of a dollar	?
2-3 of a dolla[r]	?

6 In a fifth grade arithmetic class there are 39 pupils, 2-3 of whom received a standing of 90%. How many pupils failed to secure that standing?

7 *a* How many cubic inches in a gallon?

b How many cubic inches in a bushel?

8 How many yards of carpet 1 yard wide are needed for a room 15 feet wide and 18 feet long?

9 During one week a flock of hens produced 30 dozen eggs which were sold for $.40 a dozen. Their feed cost $3.75. How much profit did they net the owner?

10 Define *three* of the following: decimal fraction, numerator, aliquot part, mixed number.

June — 1913

1 Mental test.

2 Define fraction, aliquot part, even number.

3 Copy and add:

647.21
85.6
47.75
324.
.37
125.6

(No credit will be given unless the work is absolutely correct.)

4 *a* Multiply 15¾ by 5 1-7.

b Subtract 8 2-3 from 15 1-5.

5 Express *each* of the following as a fractional part of one dollar: 50 cents, 33 1-3 cents, 40 cents, 87½ cents, 25 cents.

6 Copy and complete the following:

10 ℔ = ? oz.
12 pt. = ? qt.
4 bu. = ? pk.
72 hr. = ? days
1 £ = ? dollars

7 If 3-7 of a barrel of flour weighs 84 pounds how many pounds are there in a barrel?

8 A carload of corn weighs 56,000 pounds. Find the number of bushels of corn in the car.

9 How many yards of carpet one yard wide will be required to carpet a room 21 feet long and 15 feet wide, the carpet to be laid lengthwise of the room?

10 *a* In 8 rods how many feet?

b How many cubic feet of air in a schoolroom 28 feet long, 21 feet wide and 12 feet high?

11 Make out and receipt the bill for the following articles which Helen Rogers bought at the store of Smith and Son:

10 yards of silk @ $1.50 a yard
2 spools of silk @ $.10 a spool
½ dzoen handkerchiefs @ $1.50 a dozen
3 pairs of hose @ $.25 a pair

January — 1913

1 Mental test.

2 Add:

3675
6324
1234
6890
3109

(No credit is to be allowed unless the answer is absolutely correct.)

3 Express *each* of the following as an aliquot part of one dollar:

10 cents
25 cents
33 1-3 cents
62 1-2 cents
40 cents

4 Reduce *each* of the following to decimal fractions: 3-10, 1-4, 3-8, 3-5.

5 Define (*a*) fraction, (*b*) denominator, (*c*) even number.

6 A schoolroom is 27 ft. long and 20 ft. wide. If 15 sq. ft. are allowed for each pupil, how many pupils will this room accommodate?

7 A man placed $740.50 in a bank. At one time he drew out $82.50 and at another time $58. How much money has he left in the bank?

8 How many yards of carpet 1 yard wide will be required to carpet a room 18 feet long and 12 feet wide?

9 If a farmer allows 2¼ bushels of oats to sow an acre, how many bushels will be needed to sow 20 acres?

10 A tank is 15 ft. long, 9 ft. wide and 7 ft. deep. How many gallons will it contain?

11 *a* How many cubic inches in a bushel?

b In 82 ft. 6 in. how many rods?

December — 1912

1 Mental test.

2 Copy and add:

132.42
84.09
97.84
742.13
55.
137.82

(No credit will be allowed unless the answer is entirely correct.)

3 *a* From 26.125 take 12.709.

b Multiply 8452 by 84.

4 Express *each* of the following in cents:

1-2 of a dollar
2-3 of a dollar
3-5 of a dollar
3-4 of a dollar
3-10 of a dollar

5 If ⅜ of a dairy contains 18 cows, how many cows are there in the entire herd?

6 A school graden is 36 ft. long and 12 ft. wide and is divided equally among 18 pupils. Find (*a*) number of sq. ft. in the garden, (*b*) number of sq. ft. in each plot.

7 *a* In 6 rods how many feet?

b In 216 cubic feet how many cubic yards?

8 What will it cost to carpet a room 24 ft. long and 15 ft. wide, with carpet costing $.85 per yard?

9 A farmer raises 225 bushels of potatoes per acre. How much money should he receive from a field of 3 acres if the potatoes were sold at $.65 per bushel?

10 Define numerator, fraction, odd number.

11 Change *each* of the following to a common fraction: .25, .40, .50, .66 2-3, .12½.

June — 1912

1 Mental test.

2 Define *three* of the following: denominate number, fraction, denominator, integer.

3 *a* Multiply 2.837 by 6.5.

b From 2000 take 199.09.

4 Express the following as decimal fractions: one half, one fourth, two fifths, one tenth.

5 Write *each* of the following as an aliquot part of one dollar: 33 1-3 cents, 37½ cents, 12½ cents, 70 cents, 87½ cents.

6 *a* In 4200 pints how many gallons?

b How many square rods in an acre?

7 How many yards of carpet one yard wide will be needed to cover the floor of a room 15 feet long and 12 feet wide?

8 If a farmer feeds each of his four horses 10 quarts of oats daily, how long will 100 bushels of oats last?

9 A man sold 7500 pounds of potatoes at $.65 per bushel. How much did he receive for them?

10 A cow averaged 42 pounds of milk per day during April. What is the value of the milk for the month at $1.20 per hundred pounds?

11 Make out and receipt the bill for the following goods which you have purchased of your home merchant:

12 yards muslin @ 15c per yard
6 handkerchiefs @ 25c each
3 pairs of gloves @ $1.50 per pair

January — 1912

1 Mental test.

2 *a* How many feet in 2 rods?

b How many cubic inches in 5 gallons?

3 *a* Multiply 125.5 by 87.

b Divide 33.856 by 36.8.

4 Express *each* of the following as a common fraction in its lowest terms:

.125
.375
.33
.9
.45

5 Express *each* of the following as an aliquot part of one dollar:

25 cents
66 2-3 cents
12 1-2 cents
5 cents
20 cents

6 Reduce 4 yd. 2 ft. 11 in. to inches.

7 How many quarts of milk can be put in 2 ten-gallon cans? What is the milk worth at 6 cents per quart?

8 Find the cost of painting one side of a tight board fence 50 feet long and 12 feet high at 15 cents per square yard.

9 If 2¾ tons of hay cost $55 how much will 6 tons cost at the same rate?

10 A field planted to corn for 5 years in succession produces 60 bushels per acre the first year, 55 the second, 49 the third, 43 the fourth and 37 the fifth. Find the value, at 40 cents per bushel, of the corn grown during the 5 years.

11 Define *three* of the following: quotient, aliquot part, numerator, decimal fraction, common fraction.

December — 1911

1 Mental test.

2 Copy and add:

125.35
68.4
349.98
95.76
547.
32.55
380.01

(No credit is to be given unless the answer is absolutely correct.)

3 Change *each* of the following fractions to an equivalent fraction having 30 for a denominator:

5-6
7-10
1-2
3-5
2-3
1-2

2 Express the following as decimal fractions: one half, one eighth, three fifths.

5 *a* From 760.15 take 9.63.

b From 17 1-3 take 5¾.

6 Tell how many cents there are in *each* of the following:

1-4 of a dollar
1-3 of a dollar
5-8 of a dollar
1 1-2 dollars
5 3-5 dollars

7 Divide 401.208 by 584.

8 *a* How many inches in a foot?

b How many square inches in a square foot?

c How many cubic inches in a cubic foot?

9 If 4-7 of a farm is worth $4000, how much is the remainder worth?

10 How many days will it take to plow a field 80 rods long and 30 rods wide if 2 acres are plowed in one day?

11 How many yards of carpet one yard wide will be required to cover a room 18 feet long and 15 feet wide?

June — 1911

1 *a* Reduce one fourth, five tenths, one third to decimal fractions.

b Express the following as aliquot parts of a dollar:

12 1-2 cents
25 cents
75 cents
87 1-2 cents
33 1-3 cents

2 *a* Divide 176 by 8-9.

b Subtract 39.75 from 128.25.

3 How many tons in 2860 lbs.?

4 How many quart baskets can be filled from 3 bushels of

strawberries? What will the berries be worth at 10 cents per quart?

5 *a* Reduce five eighths, five twentieths, two thirds to decimal fractions.

b Reduce .45 and 1.5 to common fractions.

6 If a flock of 75 hens averages 160 eggs a year each, what is the value of the eggs at 24 cents per dozen?

7 A cow should have 4 ft. by 9 ft. floor space for a stall and 4 ft. by 3 ft. additional floor space for a manger. How much floor space will be required for 20 cows?

8 How many yards of carpet will be required to cover a floor 18 ft. long and 15 ft. wide? What will be the cost of the carpet at $.75 per yard?

9 On May 15 John Smith bought of Jones & Co. the following articles:

1 sack flour @ $1.50
18 lbs. sugar @ 6c per lb.
5 lbs. coffee @ 35c per lb.
4 boxes matches @ 18c per box
3 lbs. cheese @ 18c per lb.

Make out a bill in proper form and receipt it for Jones & Co.

10 *a* How many lbs. in a barrel of flour?

b How many lbs. will 18 bu. of potatoes weigh?

11 A farmer deposited in a bank $120, which was 2-3 of his income from his dairy for the month of May. What was his total income from the dairy for that month?

January — 1911

1 Add:

7824
6376
2895
5432
8489
7264
3527

(No credit is to be given unless the answer is absolutely correct.)

2 *a* Reduce 15¾ to an improper fraction.

b Divide 7 1-9 by 16-27.

3 Change the following fractions to equivalent fractions having 24 as the common denominator.

3-4
3-8
1-2
5-6
7-12

---

4 Write as decimals: three tenths, twenty-five hundredths, four and seven thousandths.

5 Change *each* of the following to a common fraction reduced to its lowest terms: .25, .9, .375, .08.

6 Multiply 1256.25 by .36.

7 How many cubic inches are there in *two* bushels? How many cubic inches in *one* gallon?

8 What part of one hundred is *each* of the following: 20, 75, 33 1-3, 25, 12½?

9 How much will it cost at 9 cents a square yard to paint a floor 18 ft. long and 16 ft. wide?

10 An automobile ran 65 miles in 2½ hours; find the average rate per hour.

11 A field of 13½ acres yielded 2 tons of hay per acre; find the value of the hay at 15 dollars per ton.

12 Five cows from a farmer's herd produced in one year 26,955 lbs. of milk; find the average income per cow if the milk was sold for 2 cents per pound.

GEOGRAPHY

June — 1910

SEVENTH GRADE

1 Where are the Philippine Islands? To what nation do they belong?

2 Define (*a*) latitude, (*b*) longitude.

3 Name the five zones and give the width of each. What determines the width of the zones?

4 Name *three* countries of Europe. Give the name of the capital and the form of government of each country named.

5 On what waters would you sail in going on a journey from London to Constantinople? *Or*

Trace a water route from Chicago to New York city.

6 Locate definitely *each* of the following and tell for what each is noted: (*a*) Buffalo, (*b*) Troy, (*c*) Rochester, (*d*) Ithaca, (*e*) West Point.

7 Describe the Panama canal as to location, length, difficulties of construction.

8 Describe *each* of the following rivers as to source, direction and the body of water into which it empties: (*a*) Ohio, (*b*) Yukon, (*c*) Amazon, (*d*) Danube, (*e*) Ganges.

9 Locate (*a*) Sidney, (*b*) Alexandria, (*c*) Bombay, (*d*) Manila, (*e*) Yokohama, (*f*) Paris, (*g*) Rome, (*h*) Constantinople, (*i*) St. Louis, (*j*) Quebec.

10 Draw an outline map of Africa. On this map locate the Nile river, the Atlas mountains, the Sahara desert, the Cape of Good Hope, Cairo.

11 To what country does India belong? Name and locate *one* of the principal cities of India.

January — 1910

1 Define equator, parallel, latitude, longitude, meridian.

2 Name *five* seas bordering (*a*) on Europe, (*b*) on Asia.

3 Name the countries comprising the British Isles. Locate London, Glasgow, Liverpool, Dublin, Bristol.

4 Name *four* important seaports on the east coast of the United States, *two* on the west coast of the United States, *three* on the Great Lakes, *one* on the Gulf of Mexico.

5 Name and locate the principal island possessions of the United States.

6 Which country of Europe is most favorably located for carrying on trade? What hinders the development of the commerce of Russia?

7 Name *three* peninsulas of Europe and mention the countries forming them.

8 Name and locate (*a*) *three* mountain ranges of Europe, (*b*) *three* important rivers of Europe, (*c*) *two* mountain ranges of Asia, (*d*) *two* rivers on the southern slope of Asia.

9 Describe *one* of the following, touching on appearance, dress and occupation: (*a*) Russians, (*b*) Chinese, (*c*) Filipinos.

10 What constitutes the British South African possessions? In what does their great value lie?

SIXTH GRADE

June — 1916

1 Draw an outline map of the United States. On this map indicate a region noted for the production of *each* of the following: corn, cotton, lumber, coal, fruit.

2 Locate by states *each* of the following: (*a*) Chicago, (*b*) St. Paul, (*c*) New Orleans, (*d*) Cleveland, (*e*) San Francisco.

3 Name *three* important seaports on the east coast of the United States. Mention some products exported from each.

4 What determines the climate of a place? London is farther north than New York. Which city is warmer and why?

5 Trace the steps in the manufacture of *one* of the following, telling where the raw material is secured: (*a*) shoes, (*b*) silk, (*c*) steel.

6 Name four of the European nations engaged in war and give the capital of *each* of these countries.

7 Name and locate *three* island possessions of the United States.

8 Describe briefly *one* of the following: Grand Canyon, Yellowstone National Park, Niagara Falls.

9 On a trip by water from Buffalo to New York name *five* cities through which you would pass and tell for what *each* is noted.

10 Define and give an illustration of *each* of the following: (*a*) river system, (*b*) peninsula, (*c*) strait, (*d*) canal, (*e*) desert.

11 How long will it take you to travel from your nearest

railroad station to New York City? *Or*

What is the distance in miles (*a*) from Buffalo to New York City, (*b*) from Plattsburg to New York City?

January — 1916

1 Make a drawing to represent a sphere and on it locate the zones, giving the width of each in degrees.

2 Define any *three* of the following: (*a*) latitude, (*b*) equator, (*c*) climate, (*d*) limited monarchy, (*e*) republic.

3 Name and locate *three* peninsulas of Europe.

4 Describe any *three* of the following rivers, giving for each its source, general direction of its course, and body of water into which it empties: (*a*) Danube, (*b*) Rhine, (*c*) Dnieper, (*d*) Rhone, (*e*) Volga.

5 From which of her foreign possessions does England receive large quantities of food supplies?

6 Locate any *four* of the following capital cities of Europe: (*a*) Berlin, (*b*) Rome, (*c*) Vienna, (*d*) Petrograd (St. Petersburg), (*e*) Paris.

7 Tell something of the climate and products (*a*) of Russia, (*b*) of France.

8 Explain the commercial and military importance of Constantinople.

9 Name and locate *two* of the Balkan States.

10 In connection with your work in geography this term, what have you read in addition to your textbook?

11 A vessel leaves Chicago for Liverpool with a cargo of wheat. Trace its route, naming the bodies of water over which it passes.

June — 1915

1 In which hemisphere and what zones is North America?

2 Mention (*a*) *two* important agricultural products of Canada, (*b*) *five* leading agricultural products of the United States.

3 Name and locate *five* cities of North America that have good harbors.

4 Name the Great Lakes. What river forms the outlet of these lakes?

5 Which are the New England States? Give the capital of each.

6 Write a paragraph on *one* of the following cities giving

its location, relative size, and principal industries: New York, Chicago, Philadelphia.

7 Mention a city of the United States located (*a*) in the grain region, (*b*) in the coal region, (*c*) in the fruit region, (*d*) in the cotton region, (*e*) in the lumber region.

8 In what city of the United States is an exposition being held? What event does this exposition celebrate?

9 Name *two* island possessions of the United States. Mention *one* product of each that is sent to our country.

10 Locate *each* of the following: (*a*) Lake Champlain, (*b*) Mohawk river, (*c*) Buffalo, (*d*) Oswego, (*e*) Albany.

11 Name some books read in connection with your work in geography this term.

January — 1915

1 Compare the coast-line of Europe with that of the United States as to (*a*) extent, (*b*) regularity. How does the extent and character of the coast-line of Europe affect its commerce?

2 Name and give the location of *three* mountain ranges and *two* large rivers of Europe.

3 *a* Compare the climate of northern Europe with that of southern Europe.

b Name some important products of each region.

4 Name the countries of Europe that border on the Atlantic ocean and the capital of each.

5 Trace a steamship route from Montreal to Liverpool. On such a voyage, of what would the cargo probably consist?

6 Give the name and location of the capital of *each* of the following countries: (*a*) Italy, (*b*) Germany, (*c*) Switzerland, (*d*) Russia, (*e*) Spain.

7 Mention an important export of *each* of the following countries: (*a*) England, (*b*) France, (*c*) Italy. Write on the production of *one* of these exports.

8 Locate *each* of the following: (*a*) Paris, (*b*) Berlin, (*c*) Antwerp, (*d*) Brussels, (*e*) Vienna.

9 Mention a country of Europe noted (*a*) for agricultural products, (*b*) for lumber.

10 Define and give illustration of *each* of the following: (*a*) river system, (*b*) isthmus, (*c*) cape, (*d*) strait, (*e*) canal.

11 Draw to represent a sphere and on it indicate the zones and the width of each.

12 Name some books you have read this year in connection with your work in geography.

June — 1914

1 Define and give an example of *each* of the following: (*a*) volcano, (*b*) canal, (*c*) river system, (*d*) watershed, (*e*) plateau.

2 Make a diagram showing the zones and giving the name and width of each zone.

3 Name *two* groups of islands in the Pacific Ocean belonging to the United States. Mention *one* important export of each.

4 Locate the following cities and mention something of interest connected with each: (*a*) Quebec, (*b*) Ottawa, (*c*) Mexico.

5 Name and locate *two* mountain systems and *three* river systems of North America.

6 Draw to represent the eastern coast line of the United States. On this coast line locate by name (*a*) *three* large cities, (*b*) *two* bays.

7 Mention a leading product of *each* of the following states: (*a*) Florida, (*b*) Pennsylvania, (*c*) Iowa, (*d*) Nevada, (*e*) Massachusetts

8 Describe briefly the manufacture of *one* of the following: flour, woolen cloth, maple sugar.

9 Through what bodies of water would a vessel pass in sailing from New York to Liverpool? Mention some products that would probably constitute the cargo of a vessel making that voyage.

10 Locate the following and tell for what *each* is noted: (*a*) Ithaca, (*b*) West Point, (*c*) Buffalo, (*d*) Troy, (*e*) Cortland.

11 Name a county in New York State of which a leading product is (*a*) lumber, (*b*) peaches, (*c*) butter, (*d*) clothing, (*e*) electrical supplies.

12 What form of government has (*a*) England, (*b*) the United States?

January — 1914

1 Draw an outline map of Europe and on it locate the following: (*a*) *three* rivers, (*b*) *three* mountain systems, (*c*) *four* important cities.

2 Describe Russia as to (*a*) surface, (*b*) size as compared with other European countries, (*c*) drainage, (*d*) products.

3 Define a republic. Name *two* countries of Europe that

have a republican form of government and *two* countries of Europe that are limited monarchies.

4 Name the countries that comprise the British Isles. Name and locate *three* important cities on these islands.

5 Give the name and the location of *three* foreign possessions of Great Britain.

6 Give approximately the time required for a steamship to sail from Liverpool to New York. Of what would its cargo probably consist?

7 Name a leading agricultural and a leading mineral product of Germany. What are *three* of the leading manufactured articles of Germany?

8 Give the two leading occupations of the people of France. What are the principal products of that country?

9 In what zones is Africa? Give its water boundaries. Locate the following cities: (*a*) Pekin, (*b*) Calcutta, (*c*) Tokyo, (*d*) Melbourne, (*e*) St. Petersburg.

10 Write a paragraph about the children of some foreign land, using the following outline:

a Appearance
b Dress
c Home life
d Education
e Occupations

11 Write briefly on the production of *one* of the following: (*a*) rubber, (*b*) beet sugar, (*c*) silk.

June — 1913

1 Draw an outline map of the United States. On this map indicate the section noted for the production of *each* of the following: (*a*) lumber, (*b*) corn, (*c*) cattle, (*d*) sugar, (*e*) cotton.

2 Define (*a*) river system, (*b*) divide, (*c*) lake, (*d*) equator, (*e*) plateau.

3 Name a large city located on *each* of the following and tell for what each city is noted: (*a*) Lake Michigan, (*b*) St. Lawrence river, (*c*) Chesapeake bay, (*d*) Mississippi river, (*e*) Lake Ontario.

4 Describe the following rivers giving the source and direction of each and the body of water into which each flows: (*a*) Columbia, (*b*) Missouri, (*c*) Ohio, (*d*) St. Lawrence, (*e*) Hudson.

5 Describe the surface of the New England States. What

influence has the surface on the occupations of the people?

6 Name a city of the United States noted for the export of each of the following: (*a*) grain, (*b*) fruit, (*c*) manufactured goods.

7 Mention *two* foreign possessions of the United States and a product received from each.

8 Name the states of which *each* of the following are capitals: (*a*) Columbus, (*b*) Hartford, (*c*) Des Moines, (*d*) Austin, (*e*) Trenton.

9 Name *two* transcontinental railroads of North America,

10 Give approximately the population of (*a*) the United States, (*b*) of New York State.

11 What countries comprise the British Isles? Name and locate *two* large cities on these islands.

January — 1913

1 Describe briefly the climate, surface and drainage of Europe.

2 Name the countries of Europe bordering on the Mediterranean sea and give the capital of each.

3 Name *three* important foreign possessions of Great Britain and tell why each is important.

4 Describe the climate and surface of Switzerland.

5 a Name *two* republics and *three* limited monarchies of Europe.

b Give the capital of each of these countries.

6 Describe any *three* of the following rivers: Danube, Rhine, Rhone, Po, Dwina.

7 Trace a water route from St. Petersburg to New York. Of what would the cargo on this voyage probably consist? Of what would it consist on the return voyage?

8 Define the following: (*a*) cape, (*b*) isthmus, (*c*) equator, (*d*) prime meridian, (*e*) climate.

9 If you should spend a summer in Europe name a city you would like to visit and give *two* reasons why you would like to visit it.

10 Name a book or books you have read in connection with your work in geography this term.

11 Give *two* reasons why so many people of Europe emigrate to America.

12 Name and describe *two* rivers of Africa.

December — 1912.

1 Name the principal water boundaries of Europe.

2 Describe Russia as to climate, products and density of population.

3 Define *two* of the following: (*a*) commerce, (*b*) irrigation, (*c*) delta, (*d*) mountain system, (*e*) peninsula.

4 Of what countries are the following cities the capitals: (*a*) Madrid, (*b*) Vienna, (*c*) Berlin, (*d*) Christiania, (*e*) Paris?

5 Locate definitely the following ranges of mountains: (*a*) the Alps, (*b*) the Pyrenees, (*c*) the Caucasus, (*d*) the Apennines, (*e*) the Carpathian.

6 What is (*a*) a limited monarchy, (*b*) a republic? Name a country of Europe that has as its form of government (*a*) a limited monarchy, (*b*) a republic.

7 Name a country or city in Europe in which *each* of the following is produced or manufactured: (*a*) carpets, (*b*) grapes, (*c*) wheat, (*d*) woolen goods, (*e*) beet sugar.

8 In what country in Europe is silk extensively manufactured? Write briefly on its production.

9 Trace a water route from Liverpool to Montreal. Of what would the cargo probably consist on such a voyage?

10 Name any book or books that you have read in connection with your work in geography this term. *Or*

Give the name and location of a great artificial waterway now being built by the United States.

11 Mention *two* motions of the earth and give the principal result of *each* of these motions.

June — 1912

1 Draw an outline map of the New England states and on it locate the following: (*a*) Portland, (*b*) Boston, (*c*) Hartford, (*d*) Connecticut river, (*e*) White mountains.

2 Name a state of the United States of which a leading product is (*a*) lumber, (*b*) corn, (*c*) oranges, (*d*) coal, (*e*) cotton.

4 Describe briefly *one* of the following, touching on surface, climate, occupation of the people and form of government: (*a*) Canada, (*b*) France.

4 Locate *each* of the following and mention an important fact concerning each: (*a*) Montreal, (*b*) Ottawa, (*c*) Quebec, (*d*) Toronto.

5 Describe the surface and climate of Mexico. Name and locate its largest city.

6 Briefly describe the manufacture of *one* of the following: flour, steel, leather, cotton cloth.

7 Define (*a*) equator, (*b*) relief of a country, (*c*) latitude.

8 Name the country to which *each* of the following belongs: Canada, Philippine islands, Australia, Alaska, Hawaiian islands.

9 Mention a country from which the United States imports (*a*) silk, (*b*) coffee, (*c*) sugar, (*d*) linen, (*e*) cutlery.

10 Define *five* of the following: (*a*) river system, (*b*) ocean current, (*c*) plateau, (*d*) isthmus, (*e*) tides, (*f*) delta, (*g*) glacier.

11 Explain why production and commerce are greater in the United States and in Europe than in Asia.

12 Name and locate *five* important cities of New York State and give an important fact concerning each.

January — 1912

1 In what zones is Europe? Tell something of the climate of (*a*) Russia, (*b*) England.

2 Give the location of *three* mountain ranges of Europe and *two* river systems of Europe.

3 Name the countries of Europe that border on the Mediterranean sea and give the capital of each country named.

4 Name a seaport in *each* of the following countries and mention an export from each seaport named: (*a*) France, (*b*) Russia, (*c*) England, (*d*) Germany.

5 Name the nation to which *each* of the following belong: (*a*) Canada, (*b*) Australia, (*c*) Philippine Islands, (*d*) India.

6 Locate *each* of the following: (*a*) Black Sea, (*b*) Gibralter, (*c*) Constantinople, (*d*) Alps, (*e*) North Sea.

7 Trace a water route from Marseilles to New York. Mention *two* products that a ship would probably carry on such a voyage.

8 Write briefly concerning the people of Germany, using the following outline: (*a*) race to which they belong, (*b*) home life, (*c*) education, (*d*) government, (*e*) occupations.

9 Define (*a*) limited monarchy, (*b*) republic. Name a country of Europe illustrating each.

10 Why do large numbers of Americans visit Rome, Italy, each year?

11 Why do large numbers of Italians annually land at the port of New York?

December — 1911

1 Name the principal water boundaries of Europe.

2 How does Europe compare in size with each of the other continents (grand divisions)? Name the largest country of Europe and give the capital of the country named.

3 Locate the principal highlands of Europe. What ranges of mountains form these highlands?

4 What is the climate of southern Europe? What section of the United States has about the same climate?

5 Describe the course of *each* of the following rivers: Volga, Danube, Dwina, Rhine, Rhone.

6 Name *three* peninsulas of Europe and the country or countries comprising *each* peninsula named.

7 What country of Europe is noted for the production of (*a*) silk, (*b*) pine lumber, (*c*) wheat, (*d*) flax, (*e*) oranges and other fruits?

8 Locate *each* of the following cities and tell for what *each* is noted: (*a*) London, (*b*) Liverpool, (*c*) Marseilles, (*d*) Rome, (*e*) Berlin.

9 Write briefly on the people of Germany touching on (*a*) appearance, (*b*) customs, (*c*) education, (*d*) occupations.

10 On what waters would a vessel sail from New Orleans to London? Of what would its cargo probably consist? What would it carry on the return voyage?

11 Make a diagram showing the zones. Give the name and the width of each zone.

12 Name the countries of North America and give the location of each country named.

13 Name and locate *two* European countries between which the relations have recently been unfriendly.

June — 1911

1 Draw outline map of the United States and on this map locate by name *two* mountain systems, the largest river system, a city on the Great Lakes, *three* seaports on the Atlantic coast, *one* seaport on the pacific coast.

2 Name a state of the United States of which *each* of the following is an important product: (*a*) coal, (*b*) copper, (*c*)

iron, (*d*) cotton, (*e*) corn, (*f*) wheat, (*g*) fruit, (*h*) milk, (*i*) woolen goods, (*j*) farm machinery.

3 Define (*a*) river basin, (*b*) mountain system, (*c*) ocean current, (*d*) glacier, (*e*) irrigation.

4 *a* Name the five zones.

b What effect has altitude upon climate?

5 Name (*a*) *three* Canadian provinces, (*b*) *three* important products of Canada. *Or*

What has recently caused the people of the United States to become more interested in the products of Canada?

6 Name a city located in *each* of the following states and tell for what each city is noted: (*a*) Illinois, (*b*) Missouri, (*c*) Louisiana, (*d*) California, (*e*) Pennsylvania.

7 Trace the route which a merchant vessel would take in sailing from Chicago to Liverpool. Of what might her cargo consist?

8 Locate *each* of the following: (*a*) Brazil, (*b*) Madagascar, (*c*) Berlin, (*d*) Nile river, (*e*) Baltic sea.

9 Name *one* country of Europe whose form of government is a republic and *one* whose form of government is a monarchy. What is the principal difference between these two forms of government?

10 Write a paragraph of at least 50 words on *one* of the following: (*a*) City of Washington, (*b*) Yellowstone National Park, (*c*) Niagara Falls.

11 Give the names of the five races of man and name a country inhabited by each.

12 Give the name of a city located in *each* of the following counties of New York State: (*a*) Erie, (*b*) Monroe, (*c*) Oneida, (*d*) Broome, (*e*) Jefferson.

January — 1911

1 Name and locate *five* important seaports of Europe.

2 Are there more people living in northern or in southern Europe?

3 Name an important product (*a*) of Russia, (*b*) of the German Empire, (*c*) of Spain, (*d*) of France, (*e*) of England.

4 Give the capital and the form of government of *each* of the following countries: Germany, France, Russia.

5 For what is Switzerland noted? Give its form of government.

6 Describe *each* of the following rivers as to source, direc-

tion, body of water into which each flows: Rhine, Danube, Volga, Vistula, Po.

7 On what waters would a vessel sail from Marseilles to Boston? With what products would the vessel probably be loaded?

8 Mention *three* of the foreign possessions of Great Britain and give the location of each possession mentioned.

9 Name the water boundaries of Europe.

10 From the following outline write a paragraph about Russia:

People
Government
Education
Occupations

11 Name the rivers that drain the eastern section of New York State.

June — 1916

FIFTH GRADE

1 Draw a map of South America. Locate on this map Brazil, Argentine, the Amazon river, and the Andes mountains.

2 Locate and name an important product of each of *three* of the following: (*a*) China, (*b*) Egypt, (*c*) Cuba, (*d*) India, (*e*) Alaska.

3 How does Asia compare in size with the other continents? In what zones is Asia located?

4 Name *three* principal rivers of Africa. Tell how farming is carried on in Egypt.

5 South Africa is inhabited largely by people from Europe. Why did they go there to live?

6 Locate *each* of the following: (*a*) Calcutta, (*b*) Peking, (*c*) Suez canal, (*d*) Ganges river, (*e*) Himalaya mountains.

7 Write a paragraph on the Arabs or the Japanese, telling about their homes, clothing, food and occupations.

8 Name an important city of Australia. To what nation does Australia belong?

9 Mention the principal occupations of the people of Australia. To what country are the products of Australia largely sent?

10 Locate (*a*) the pampas, (*b*) the silvas. What product is secured from each?

11 Define and give an illustration of *each* of the following: (*a*) island, (*b*) lake, (*c*) isthmus, (*d*) mountain range, (*e*) plain.

January — 1916

1 Define and give an illustration of *each* of the following: (*a*) river system, (*b*) peninsula, (*c*) island, (*d*) canal, (*e*) strait.

2 Give the water boundaries of North America.

3 Draw an outline map of New York State.

4 On the map drawn, locate (*a*) New York City, (*b*) Buffalo, (*c*) Albany, (*d*) Hudson river, (*e*) Adirondack mountains.

5 Draw a map of the county in which you live and tell in what part of the state it is located.

6 Name *three* of the leading manufactured articles or *three* of the leading agricultural products of your county.

7 Mention *three* reasons why New York is called the Empire State. *Or*

Give approximately the population (*a*) of New York State, (*b*) of New York City.

8 Locate the following places and tell for what *each* is noted: (*a*) Troy, (*b*) Rochester, (*c*) Ithaca, (*d*) Cortland, (*e*) Niagara Falls.

9 Write on the production of *one* of the following: (*a*) corn, (*b*) potatoes, (*c*) butter, (*d*) paper, (*e*) maple sugar.

10 Name *two* counties of New York noted for each of the following: (*a*) garden products, (*b*) fruit, (*c*) lumber, (*d*) dairy products.

June — 1915

1 Which is the larger, South America or North America? Name *two* ways in which the surfaces of these divisions are alike.

2 What is the difference between the silvas and the pampas of South America?

3 Draw an outline map of South America. On this map locate with name, (*a*) Amazon river, (*b*) Orinoco river, (*c*) Andes mountains, (*d*) Rio de Janeiro, (*e*) Strait of Magellan.

4 Is the coast line of Asia regular or irregular? Name *five* seas bordering on Asia.

5 Where are (*a*) the Japan Islands, (*b*) the Philippine Islands? Name an important city on *each* of these groups of islands.

6 Name *three* important products of China.

7 What is the principal article of food used by the Chinese? Why is the mulberry tree grown extensively in China and France?

8 In what zones is Africa?

9 Locate the Suez canal and tell why it is important.

10 Name and locate (*a*) *two* rivers of Africa, (*b*) *one* desert in Africa.

11 Write a paragraph on Australia, telling something of its location, climate, people, and industries.

12 Name the books read in connection with your work in geography this term.

January — 1915

1 Name and describe *three* large drainage systems of New York State.

2 Name and locate *three* places in New York State noted for their beautiful scenery.

3 Mention *three* reasons why New York is called the Empire State.

4 Draw an outline map of New York. On this map locate by name (*a*) the place where you live, (*b*) the city nearest your home, (*c*) *two* mountain regions, (*d*) *three* border lakes, (*e*) *two* rivers that form boundaries.

5 Name *five* cities through which the New York Central railway passes and tell for what each city is noted.

6 Give the name of an educational institution located at *each* of the following places: (*a*) Ithaca, (*b*) West Point, (*c*) Albany, (*d*) Cortland, (*e*) Syracuse.

7 Write on the production or manufacture of *one* of the following: (*a*) paper, (*b*) butter, (*c*) corn, (*d*) potatoes, (*e*) lumber.

8 Define each of the following: (*a*) island, (*b*) peninsula, (*c*) mountain system, (*d*) latitude, (*e*) equator.

9 Mention the principal bodies of water bounding North America.

10 Name and locate *two* mountain systems and *three* great river systems of North America.

11 How has the water route from New York to San Francisco recently been made shorter?

12 Name *three* principal occupations of the people of your county.

June — 1914

1 Name the water boundaries of South America.

2 Mention the largest country of South America. Give *two* of its leading exports.

3 Locate and describe *each* of the following: (*a*) the silvas, (*b*) the pampas, (*c*) the llanos. *Or*

Tell something of the climate and products of Argentina.

4 Name *three* articles of clothing manufactured in New York State and tell where each is made.

5 Mention some of the leading products of China.

6 Draw an outline map of Africa.

7 On the map drawn in answer to question 6, locate the following: (*a*) Sahara desert, (*b*) Nile river, (*c*) Lake Victoria, (*d*) Alexandria, (*e*) Cape of Good Hope.

8 Locate the following: (*a*) Pekin, (*b*) Calcutta, (*c*) Isthmus of Suez, (*d*) Himalaya mountains, (*e*) Tokyo.

9 In what part of Africa are (*a*) diamond mines, (*b*) gold mines?

10 Locate Australia. Tell something of its climate and products.

11 Define (*a*) island, (*b*) strait, (*c*) lake, (*d*) peninsula, (*e*) isthmus.

12 Give the names of some good books you have read this term in connection with your work in geography.

January — 1914

1 Draw an outline map of New York State and on it locate by name the *five* largest cities.

2 On the map drawn in answer to question 1, trace and name (*a*) an important railroad, (*b*) a large river, (*c*) a canal.

3 Mention *two* mineral products and *three* agricultural products of this state and tell in what part each is found or produced. *Or*

Mention *five* important industries carried on in New York State.

4 Name *five* domestic animals of New York State and tell for what each is valuable.

5 Name the counties of this state that border on (*a*) Lake Ontario, (*b*) Pennsylvania. Name the counties on Long Island.

6 Name and locate a city in New York State noted for the

manufacture of (*a*) clothing, (*b*) electrical supplies, (*c*) gloves, (*d*) boots and shoes, (*e*) collars.

7 Name *five* articles that are produced in this state and are on sale in the stores of your village or city.

8 Name and locate (*a*) *two* mountain systems of North America, (*b*) *three* river systems of North America.

9 Mention *three* of the leading products of Canada. To what country are these products largely sent?

10 Name the largest country of South America. What is the capital of the country that you have named?

11 What group of islands is north of South America?

June — 1913

1 Draw a map of South America. On this map represent and name (*a*) three rivers, (*b*) two highland regions.

2 Name *two* important products of South America that are sent to the United States.

3 Locate definitely *each* of the following cities: (*a*) Calcutta, (*b*) Cairo, (*c*) Hong Kong, (*d*) Sydney, (*e*) London.

4 Locate the Suez Canal and tell why it is important.

5 What island is southeast of Africa? (*b*) What large lake is situated in eastern Africa?

6 Locate Australia and mention *two* leading occupations of its people.

7 On what waters would a vessel sail from Bombay to Liverpool? Of what would its cargo probably consist?

8 Write on *one* of the following countries describing briefly its climate, government and people: (*a*) China, (*b*) India.

9 Make a drawing to illustrate the general form of (*a*) a peninsula, (*b*) an island, (*c*) a strait.

10 Mention *two* railroads connecting New York City and Buffalo.

11 Locate *three* of the following cities: (*a*) Buffalo, (*b*) Albany, (*c*) Oswego, (*d*) Rochester, (*e*) Schenectady.

12 Give *two* reasons why New York is called the Empire State.

January — 1913

1 Define (*a*) mountain, (*b*) lake, (*c*) river system. Give an example of each located in New York State.

2 Draw an outline map of New York State. On the map, draw to represent (*a*) Hudson river, (*b*) Genesee river, (*c*) Lake Champlain, (*d*) Niagara Falls, (*e*) Erie canal.

3 On the map in answer to question 2 locate (*a*) Buffalo, (*b*) Schenectady, (*c*) New York, (*d*) Binghamton, (*e*) Watertown.

4 Name *three* agricultural sections of New York State and tell what is produced in each. *Or*

Name *three* of the leading agricultural products of your county.

5 Name *two* of the important minerals found in New York State. For what is each used?

6 New York is the leading manufacturing state in the Union. Name *four* important articles manufactured in this state and tell where they are made.

7 Give approximately the length of the Erie canal.

8 In what part of the state is your county located? Name the counties that border on your county.

9 Name and locate (*a*) *two* mountain systems of North America, (*b*) *three* river systems of North America.

10 Briefly compare North America with South America as to area and coast line.

11 In what zones is South America?

December — 1912.

1 Draw an outline map of New York State and on the map locate (*a*) Catskill mountains, (*b*) Mohawk river, (*c*) Lake George, (*d*) Finger Lakes, (*e*) Oswego river.

2 Name (*a*) the counties of this state bordering on the St. Lawrence river, (*b*) the counties on the east bank of the Hudson river.

3 Name a city in *each* of the following counties: (*a*) Onondaga, (*b*) Monroe, (*c*) Rensselaer, (*d*) Albany, (*e*) Erie.

4 Mention a section of New York State noted for *each* of the following: (*a*) dairy products, (*b*) fruit, (*c*) lumber, (*d*) salt, (*e*) manufacture of clothing.

5 Name (*a*) *five* domestic animals of New York State, (*b*) *five* wild animals of New York State.

6 Write briefly on the manufacture or production of *one* of the following: (*a*) butter, (*b*) salt, (*c*) paper, (*d*) flour, (*e*) lumber.

7 Give the approximate distance from (*a*) New York City to Albany, (*b*) Albany to Buffalo.

8 Define and give an illustration of *each* of the following: (*a*) isthmus, (*b*) bay, (*c*) peninsula, (*d*) island, (*e*) lake.

9 Name the countries of North America.

10 What country bounds United States on the north? Name and locate *two* cities in that country.

11 Name *one* mountain range and *one* river system of North America.

June — 1912

1 Name and locate *two* important peninsulas and *three* mountain ranges of Europe.

2 Describe *two* of the following rivers: (*a*) Volga, (*b*) Danube, (*c*) Po, (*d*) Rhine, (*e*) Seine.

3 Name *two* important exports of South America and tell from what cities they are shipped.

4 In what part of South America is (*a*) the rainy region, (*b*) the rainless region?

5 Write on *one* of the following, telling (*a*) regions where it is produced, (*b*) climate required, (*c*) way in which it is manufactured: silk, cotton, rubber.

6 On what water would a vessel sail in going from New York to Rio de Janeiro? What might a merchant ship carry on such a voyage?

7 In what zones is Asia? Tell something of the climate and products of Asia.

8 Name a nation whose ruler is called (*a*) king, (*b*) czar, (*c*) mikado, (*d*) sultan.

9 Locate the Sahara desert. Describe *two* river systems of Africa.

10 Give the location of *each* of the following cities: (*a*) Rome, (*b*) Calcutta, (*c*) Melbourne, (*d*) Edinburgh, (*e*) Washington.

11 What is a river system? Name *three* river systems that drain New York State.

January — 1912

1 Name the counties that border on (*a*) Lake Erie, (*b*) Lake Ontario.

2 Draw an outline map of New York. On this map locate, with name, (*a*) a canal, (*b*) five large cities, (*c*) a railroad from Buffalo to New York City.

3 Give the approximate distance from (*a*) Buffalo to Albany, (*b*) Albany to New York.

4 Name *five* products of New York State and mention the part of the state in which each is produced.

5 Mention *three* drainage systems wholly or partly in the

state of New York and tell how the waters of each system reach the ocean.

6 Write on *one* of the following, telling where in New York State the industry is carried on extensively: (*a*) fruit raising, (*b*) cheese making, (*c*) market gardening.

7 *a* In what direction do the waters of the Niagara river flow?

b In what direction do the waters of the St. Lawrence river flow?

8 Give the approximate latitude of New York City. Mention *two* conditions besides latitude that affect climate.

9 Name the five zones and give the width of each zone in degrees.

10 Locate the Great Central plain of the United States. Name *three* rivers that drain this plain.

11 Name the principal water boundaries of North America.

12 Locate *each* of the following cities and tell for what each is noted: (*a*) Chicago, (*b*) Montreal, (*c*) Washington, (*d*) Buffalo, (*e*) New Orleans.

December — 1911

1 Define *each* of the following and give an example of each: (*a*) island, (*b*) river basin, (*c*) peninsula, (*d*) isthmus, (*e*) lake.

2 In what zones is North America? Name the countries of North America.

3 Draw an outline map of New York State and on this map locate (*a*) *three* important rivers, (*b*) *two* groups of mountains, (*c*) the county in which you live.

4 A canal boat is loaded at Buffalo; describe its route to New York City, giving the names of *five* cities through which the boat will pass.

5 Name the counties of New York State (*a*) that form the southern boundary, (*b*) that border on Lake Champlain.

6 Name an agricultural industry of the people in your county. Why is your county well suited for this industry?

7 Give the approximate time required to go by rail from Plattsburg to New York City *or* from Buffalo to Albany.

8 Give *three* reasons why New York is called the Empire State.

9 Describe the surface and the climate of western New York. For what is that region well adapted?

10 New York is the leading state in manufacturing. Name *three* articles manufactured extensively in New York State.

11 Write on *one* of the following: lumbering, market gardening, making butter.

12 Name *two* mountain systems of North America and *three* river systems of North America.

June — 1911

1 Draw an outline map of South America and on this map locate (*a*) Buenos Aires, (*b*) Valparaiso, (*c*) Rio de Janeiro, (*d*) Amazon river, (*e*) Andes mountains.

2 Name (*a*) *three* lowland regions of South America, (*b*) *two* highland regions of South America.

3 Name *two* important products of South America that are sent to the United States and name the port from which *each* of these products is shipped.

4 Define (*a*) island, (*b*) peninsula, (*c*) strait. Give an example of each.

5 Name *five* bodies of water forming part of the western boundary of Asia.

6 Locate *each* of the following: (*a*) Himalayas, (*b*) Ganges, (*c*) Tokyo.

7 In what zones is Africa located?

8 Mention the important products of Australia.

9 On what water would a merchant ship sail from New York to Buenos Aires? Of what might the cargo consist?

10 What grand divisions comprise the eastern hemisphere?

11 Name a county of New York State in which *each* of the following is an important produce: (*a*) salt, (*b*) peaches, (*c*) milk, (*d*) lumber, (*e*) electrical supplies.

12 Name the counties that border on Lake Ontario and those that border on the St. Lawrence river.

January — 1911

1 Draw a map of New York State and on this map locate Niagara Falls, Thousand Islands, the Palisades, Catskill mountains, Adirondack mountains.

2 Name *five* counties through which the Erie canal extends; *three* cities through which this canal passes.

3 *a* Mention a section of New York State noted for the production (1) of dairy products, (2) of lumber.

b Name a city of New York State noted for the production (1) of electric supplies, (2) of boots and shoes, (3) of collars and cuffs.

4 For what is *each* of the following places particularly noted: (*a*) Ithaca, (*b*) Saratoga, (*c*) West Point, (*d*) Albany, (*e*) Buffalo?

5 Give the approximate distance *either* from Buffalo to New York City *or* from Rouses Point to New York City.

6 Write on the production of *one* of the following: (*a*) maple sugar, (*b*) salt, (*c*) cheese, (*d*) butter, (*e*) petroleum.

7 Name *three* lakes of New York State noted for their beautiful scenery.

8 Name *five* countries of Europe and give the capital of each.

9 Name and locate the largest city in the world.

10 *a* Name the countries that comprise the British Isles.

b Mention two colonies of Great Britain.

11 In what part of North America and in what zone do we live?

12 Name *three* bays on the eastern coast of the United States and *two* capes on the eastern coast of the United States.

13 Mention *two* important products of South America and name the countries in which they are produced.

14 What are the important mountain systems of North America?

15 Locate (*a*) *one* of the important manufacturing regions of the United States, (*b*) *one* of the chief agricultural regions of the United States.

NATURE STUDY AND AGRICULTURE

SEVENTH GRADE

June — 1916

1 Where do the chickadees build their nests? When?

2 Name *three* birds that you know by their song or note.

3 In what ways is the crow a friend of the farmer?

4 Name *two* beef breeds and *two* milk breeds of cows.

5 How is milk tested for butter fat? Why is this test important?

6 Name *three* small animals that are found in the woods and fields and describe *one* of them.

7 If black corn and white corn are planted near together, what is the result? Explain this result.

8 Do all ears of corn have the same number of rows of kernels? Is this number odd or even?

9 In what four forms do moths and butterflies appear during their lives?

10 Name *three* insects that you know by sight that are injurious to the farmer and describe *one* of them.

11 Describe the house fly as to number of wings, number of feet, kind of eyes and kind of mouth.

12 Name *two* kinds of fruit trees that grow in your neighborhood and describe the fruit of *one* of them.

13 What trees in your neighborhood are the first to have leaves in the spring?

14 What is the purpose of Arbor Day?

January — 1916

1 Describe the chickadee, giving size, color of head, breast and wings, and shape of beak and tail.

2 What is the principal food of the chickadee? Where is this food found and how is it obtained?

3 Name *three* common breeds of hens and give *two* leading characteristics of one of these breeds.

4 Tell briefly how a horse should be cared for after a day's work, as to watering and feeding, grooming, bedding and blanketing.

5 Name *three* breeds of cattle that you know and describe *one* of these breeds as to color, general shape and type.

6 What is the Babcock test for milk? Why is it of value to the dairyman?

7 Name the four different forms in which moths and butterflies appear during their life history.

8 Describe briefly the Monarch or the Sovereign butterfly as to size, color and food.

9 Why should every effort be made to destroy the eggs of the tent caterpillar? Where may these eggs be found and when?

10 Name *three* varieties of corn and describe the kernel of *one* of these varieties, giving color, size, general appearance and parts.

11 Describe how seed corn may be tested. Why is this test important?

12 Name *three* flowers and *two* weeds that you know. Describe *one* flower as to blossom, leaf and seed.

13 Describe the oak tree as to size, shape, leaf, fruit or seed, and use.

14 Name *three* varieties of apples that you know. At what season of the year is each good to use?

15 Name *three* reasons why trees are a proper subject for study.

June — 1915

1 *a* Is the English sparrow a desirable bird?

b Give two reasons for your answer.

2 Name *three* kinds of food suitable for hens.

3 Name *three* kinds of dogs that you know by sight and describe *one* of them as to size, color and habits.

4 Explain how a horse that is working should be fed, giving kinds of food, how often to be fed, and how much.

5 Why are leguminous plants of great benefit to the farmer or gardener?

6 *a* Name two weeds that are especially troublesome in your school district.

b Tell how these weeds may be destroyed.

7 Describe a grasshopper or a cricket, giving size, color, number of legs, shape of legs, kind of wings.

8 Name *three* injurious insects and the crop or plant which they injure.

9 Name *five* kinds of trees that grow in your town.

10 Give *three* uses of the maple tree.

January — 1915

1 Name *two* purposes for which hens are kept or raised. Name a breed best adapted to each purpose.

2 Name *four* birds that you know by sight and give some characteristic by which you know *one* of these birds.

3 Describe the nuthatch or the chickadee as to size, coloring, food and habits.

4 Why is milk tested for butter fat? What amount of butter fat in milk is required by the milk regulations of this state?

5 What food is suitable for a horse? How often and how much should a working horse be fed?

6 How may the age of a horse be told? Explain.

7 In what way are the clovers, alfalfa, peas and beans useful as growing crops? Why must land be manured or fertilized?

8 What is meant by a weed? Name *three* plants commonly called weeds in your district.

9 Name and make drawings of *two* kinds of grasses in your district.

10 Tell where the eggs of the following insects are laid: (*a*) the tent caterpillar, (*b*) the potato beetle, (*c*) the cabbage worm.

11 Name *three* kinds of trees that you know and describe the leaf, bark and wood of *one* of these trees.

12 Why should the growing of trees be encouraged? Give *three* uses of trees.

13 Explain the difference between evergreen trees and other trees.

June — 1914

1 Name *five* birds that you have studied or read about and that you know at sight. Describe *one* of them as to shape, size, color, food and use.

2 *a* Mention three breeds of domestic fowls.

b Which of these are profitable for food and which for producing eggs?

3 What is a balanced ration?

4 What is the most valuable constituent of milk?

5 *a* Tell which of the following weeds you know by sight: burdock, daisy, wild carrot, purslane, Canada thistle.

b Describe one of them and tell how it may be destroyed.

6 How may potatoes be protected from damage by the potato beetle?

7 From the following list name the trees that grow in

your school district: hemlock, pine, walnut, peach, poplar, apple, oak, spruce, maple, sumac.

8 Name *three* trees which shed their leaves in the fall, and *two* which do not.

9 Name *two* respects in which butterflies differ from moths.

10 Sketch the leaf of the elm, oak or maple.

January — 1914

1 Describe *one* of the following birds, giving (*a*) size, (*b*) color, (*c*) shape of bill, (*d*) food, (*e*) economic value: downy woodpecker, chickadee, hen, guinea fowl, turkey, robin, crow.

2 Draw a diagram of a feather, naming the several parts.

3 *a* Name five breeds of hens.

b Describe the leading or distinguishing characteristics of *one* of the breeds of hens named in answer to *a*.

4 *a* Describe the earthworm or angleworm.

b Of what use are these worms in the soil?

5 *a* Name the four principal dairy breeds of cattle in the United States.

b Describe as to size, weight, color and quality of milk, *one* of the breeds named in answer to *a*.

6 *a* What is a Babcock tester?

b Why is the use of a Babcock tester important to the butter maker?

7 *a* Name three grains grown extensively in New York State and used as food for man and beast.

b Describe, as to leaf, seed and root, *one* of the grains named in answer to *a*.

8 *a* State which of the following plants are commonly called weeds:

dandelion	cabbage	burdock
clover	thistle	tomato
wild carrot	turnip	daisy
nasturtium		

b Describe the seed of *one* of the weeds named in *a* and tell how the seeds are scattered.

9 Describe *either* the oat plant when ready to be harvested, *or* the radish.

10 Describe the eggs of the potato beetle and tell where they may be found. *Or*

Describe the eggs of the mosquito and tell where they may be found.

11 *a* Name the three parts of an insect.

b Name *two* respects in which spiders differ from insects.

12 State which of the following insects are useful to man and tell why each is considered useful:

ant	horse fly
spider	may beetle
mosquito	butterfly
lady beetle	wasp
honeybee	hornet

13 *a* Name *five* trees that grow in your school district and that you know by sight.

b Describe the leaf and fruit and *one* of the trees named in answer to *a*.

14 Name *three* distinguishing characteristics of the elm tree.

15 For what purpose is the wood of *each* of the following trees used: oak, elm, cedar, walnut, hemlock, maple, spruce, poplar, pine, locust?

16 *a* Name three kinds of fruit trees that you have seen or that grow in your school district.

b What can be done to protect a fruit orchard from its enemies?

June — 1913

1 Name *two* points of difference between the nuthatch and the woodpecker.

2 Draw a diagram of a feather, giving names to the parts.

3 *a* How should young chickens be fed and cared for?

b From what enemies must young chickens be protected and guarded?

4 Name *two* dairy breeds of cattle that you know by sight. Which of the breeds you have named gives the richest milk?

5 What is meant by balanced diet or rations for dairy cows?

6 *a* Upon what does the value of milk produced for making butter depend?

b What is the standard for good milk?

7 *a* Is a potato a root or a stem?

b What is the difference between a root and an underground stem?

8 How is the soil benefited by the growing of the clovers, beans, peas and alfalfa?

9 Name *five* common weeds which are troublesome to farmers and gardeners, and tell how to destroy *one* of these weeds.

10 On what kind of soil are the best potatoes grown?

11 *a* Describe the potato beetle as to size, color, markings of body and number of wings.

b Where are the potato beetle's eggs usually laid?

12 Describe the tent caterpillar. On what kinds of trees and shrubs do you find the tents of these caterpillars?

13 *a* How many legs has a spider?

b Describe a spider's web which you have carefully observed.

14 Describe the leaf and the flower of the locust tree. What other flowers does the flower of the locust tree resemble?

15 Name *three* trees that you know by the leaf and *two* that you know by the wood. Describe the leaf and wood of *one* of these trees?

16 Why is it important that forests shall be preserved?

17 Describe quite fully how a tree should be transplanted so that it may continue to grow.

January — 1913

1 How should hens be fed and cared for through the winter?

2 Why should the nuthatch be protected and encouraged?

3 How should eggs be graded and packed for market?

4 How is the food of cows digested? What is the "cud"?

5 What three substances or nutrients should be found in food for cattle?

6 What is a balanced ration?

7 Describe the steps of raising a crop of potatoes for market, giving present market price.

8 What plants are grown for hay? For what animals is hay a food?

9 Describe the root of a clover, showing why the clovers are so important to the fertility of the soil.

10 How many legs has an insect and to what part of its body are the legs and wings attached?

11 Describe the lady beetle. Why is it useful to the farmer or gardener?

12 Where are the eggs of the tent caterpillar laid? Tell how you would know them to be the eggs of this caterpillar.

13 How are the winter buds of the locust tree protected and what do these winter buds contain?

14 For what purposes is the wood of the locust tree used and why is it valuable for these purposes?

15 What kinds of trees in your school district do not shed their leaves in the fall? Describe the leaf of *one* of them.

December — 1912

1 Describe the setting of a hen touching on (*a*) number of eggs, (*b*) care of the hen while she is sitting, (*c*) time before the eggs will hatch.

2 Describe the foot of a nuthatch and illustrate by a drawing.

3 In what ways may poultry raising be made profitable?

4 Describe the principal characteristics of any *two* of the breeds of cows.

5 What amount of butter fat should good milk contain?

6 Why should the raising of cats be discouraged?

7 Name the *three* parts of a plant. What is a potato?

8 Describe the eye of a potato, telling what it is, and what its use is.

9 What grains are grown in your school district? Name *one* of these grains and state for what it is used and for what price it is sold.

10 Name the three parts of an insect and illustrate them by a drawing. *Or*

Where are the eggs of the potato beetle laid? Describe the slug of this beetle.

11 Where do the potato beetle and the lady beetle spend the winter?

12 How many kinds of spiders have you seen this term?

13 What varieties of fruit are raised in your school district? What is their value as food?

14 What is the purpose of the bark of a tree? Where is the growing part of a tree?

15 When does a locust tree blossom? Describe the flower of the locust as to size, color, odor and resemblance to other flowers.

June — 1912

1 Name *four* things that you have learned about the downy woodpecker.

2 Draw a diagram showing the different parts of a feather and give the names of these parts.

3 Write on the value of the hen, covering the following points (*a*) value as food, (*b*) value as a producer of eggs, (*c*) value as a product for market.

4 What animal have you been studying this term? Give *three* characteristics by which you recognize this animal.

5 What do toads feed upon and where do they find this food?

6 Name *two* beef breeds and *two* dairy breeds of cattle.

7 Tell briefly how the plant that you have been studying this term is cultivated. In what consists its value to the farmer?

8 Why are the clovers and the legumes, as peas and beans, very useful to the farmer?

9 Name *five* weeds that you know by sight and tell how any *two* of them may be destroyed.

10 Name the three parts of an insect and describe these parts as they are found in the ant.

11 How is honey made? Where do the bees find the material?

12 Give briefly the life history of the potato beetle and tell how to destroy these beetles most effectually.

13 Describe, as to root, trunk, leaf, bark and fruit, the tree that you have been studying this term.

14 Describe the process of tree grafting. What great benefit comes from this process?

15 What is being done in your town to preserve the trees? Why is this necessary?

January — 1912

1 Write a brief description of the bird that you have had for special study this year.

2 The downy woodpecker is often called "Friend Downy." Why do we call this bird "Friend Downy?"

3 Name *two* breeds of fowls with which you are familiar and give *two* characteristics of one of the breeds named.

4 Give a brief description of the animal that you have had for special study this year.

5 What part of milk is the principal constituent of butter? What amount of this substance does milk usually contain?

6 Mention *three* essentials for a sanitary cow stable.

7 What plant is indicated for special study this year? Give a brief description of this plant and tell how it is cultivated.

8 To what class of plants does the bean belong? Tell why this class of plants is so important to the farmer.

9 Mention *three* ways in which seeds are dispersed or scattered.

10 Give a brief description of the insect that you have had for special study this year and tell where this insect may be found.

11 How are bees of great service to plants? *Or*
Tell something of the habits of the ant.

12 Give the names of *three* insects that are injurious and tell how to destroy any *one* of the insects named.

13 What tree is indicated for special study this year? Give a brief description of this tree and tell for what purpose it is grown.

14 Of what use to the tree is (*a*) the bark, (*b*) the wood, (*c*) the leaf?

15 Tell how to plant an apple tree. *Or*
Describe a maple tree.

December — 1911

1 What bird have you studied this year? Write a brief description of the bird that you name.

2 Name *five* birds with which you are familiar. Give *three* points by which you recognize any *one* of the birds named.

3 Mention *three* ways in which feathers are useful to birds and fowls.

4 Give a brief description of the animal that you have had for special study this year.

5 Name *two* dairy breeds of cattle and *two* beef breeds of cattle.

6 Why should toads be protected and not frightened away from gardens?

7 Give a brief description of the plant that you have had for special study this year.

8 Name *five* plants, known to you at sight, *three* of which are cultivated for food and *two* of which are considered as weeds.

9 Mention *five* ways in which corn is valuable to the farmer.

10 What insect have you studied this year? Describe it briefly and tell where it may be found.

11 What are the three parts of an insect? How many legs have insects and to which part are the legs attached?

12 How many kinds of bees are in every hive? *Or*
In what curious ways do ants get food?

13 Give a brief description of the tree that you have had for special study this year.

14 What are winter buds? How are winter buds protected?

15 Name *three* kinds of apples with which you are familiar and describe *one* of the kinds named.

June — 1911

1 Which of the following birds do you know at sight: bluebird, robin, brown creeper, barn swallow, hawk, goose, crow, canary, oriole, swan?

2 If you were setting a hen how many eggs would you place under her? What is the hatching period for hens' eggs?

3 Describe a chickadee as to size, form, color and habits.

4 How does the foot of a cow differ from that of a horse?

5 Mention *three* things essential to a sanitary cow stable.

6 State *two* ways in which a cat differs from a dog. *Or*
State *two* ways in which a squirrel resembles a dog.

7 Describe the manner in which a kernel of corn germinates. *Or*
Describe the manner in which a pea germinates.

8 Which of the following plants do you know at sight: violet, milkweed, poppy, cabbage, dandelion, daisy, geranium, columbine, lettuce, Canada thistle?

9 What is a weed?

10 Name *three* insects injurious to the farmer.

11 How do you distinguish between a butterfly and a moth?

12 Mention *three* important points to be considered in selecting corn for planting.

13 Describe the manner in which an apple tree or a maple tree grows.

14 *a* Which of the following trees do you know at sight: apple, hemlock, pine, hickory, maple, locust, poplar, elm, oak, beech?

b Which of the trees mentioned in *a* shed their leaves in the fall?

January — 1911

1 How does a horse get up, front legs first or hind legs first? How do you know?

2 Mention the three types of horses we have in use. Describe the main feature of any one of them.

3 Tell how you know a chickadee when you see one. *Or* Mention *two* distinguishing features of the barn swallow.

4 Is the chickadee of any use to the farmer? Why?

5 What are the colorings of the monarch butterfly? *Or* How many legs has a butterfly? How do you know?

6 What *three* forms do insects take after hatching from the eggs?

7 Mention some enemies of corn. How may the farmer guard against them?

8 How can the farmer tell when corn is ready to be harvested?

9 What weeds that you have seen this last year are most common?

10 Write a letter to your teacher, telling how *one* of the following crops is harvested: corn, potatoes, cabbage, apples, tomatoes.

FIFTH AND SIXTH GRADES

June — 1916

1 Name *three* breeds of hens and describe *one* of them.

2 Describe briefly the chickadee, as to size, color of back and breast, shape of bill and form of feet.

3 Name *three* birds that you know by sight and *two* that you know by their song or note.

4 Name *two* types or breeds of horses and describe *one* of them.

5 Name *three* things for which cows are kept. What is meant by butter fat?

6 Upon what does the value of a dairy cow depend?

7 Where are the eggs of the tent caterpillar found?

8 What should be done to prevent damage by tent caterpillars?

9 When should seed corn be selected?

10 Name *five* common flowers that you know by sight.

11 Name *five* garden vegetables or fruits and describe *one* of them.

12 What is the fruit or seed of the oak tree called?

13 Name *two* evergreen trees that you know. Why are they called evergreen?

January — 1916

1 What bird have you studied this year? Describe it as to size, color, and shape of beak.

2 Name *two* breeds of hens that you know. Name *two* things most noticeable about one of these breeds.

3 What winter birds have you seen this year? Tell where you saw them and what they seemed to be doing.

4 Name *two* types of horses that you know. How do they differ?

5 Name *two* breeds of cows that you know. How do they differ?

6 Name *three* grains used for food for horses and *two* kinds of food suitable for cows.

7 Give *two* markings by which a Monarch or a Sovereign butterfly may be known when seen.

8 Give *one* difference between a moth and a butterfly.

9 Give *two* reasons why everyone should endeavor to prevent the breeding of house flies.

10 Name *two* varieties of corn that you know and describe the kernel of *one* of them, giving color, shape and appearance.

11 Give *three* characteristics of a perfect ear of corn.

12 Tell which of the following weeds you know: white daisy, burdock, wild carrot, shepherd's purse. Name some leading characteristic of *one* of these weeds.

13 What is the tree for special study this year?

14 What is meant by an evergreen tree? Name *one* kind.

15 Tell which of the following trees you know and have seen this year: apple, pine, hickory, maple, oak, locust, pear, peach. Mention the purposes for which *one* of these trees is used.

June — 1915

1 Describe briefly the English sparrow, giving size and color or markings.

2 *a* Name *three* kinds or breeds of hens.

b Describe how you know or recognize *one* kind.

3 Name *three* purposes for which cows are kept by the farmer.

4 Name *three* kinds of dogs that you know.

5 Describe one way to test seed corn to find whether it will grow.

6 Describe the sprouting of a pea.

7 *a* Where may the eggs of a tent caterpillar be found?

b Why should they be destroyed?

8 Describe a grasshopper or cricket as to color, number of legs, number of wings, food and places where found.

9 Describe a maple seed by a drawing or otherwise.

10 Name *five* varieties of fruit trees that you know. Describe the leaf of *one* of them.

January — 1915

1 Give *two* reasons why the English sparrow is an undesirable bird.

2 Tell which of the following birds you know by sight or have seen this year: nuthatch, English sparrow, canary, barn swallow, bobolink, robin, chickadee, downy woodpecker, crow, snowflake.

3 Name *two* of these birds that are useful to the farmer and give *one* reason why they are useful.

4 Name *three* kinds or breeds of dogs that you know and give some distinguishing mark of *two* of these breeds.

5 Explain the difference in the manner in which a horse and a cow get up after they have been lying down.

6 Name *two* breeds of cattle and give *two* reasons why they are raised or kept on the farm.

7 Name *three* weeds found in your school district that are troublesome to the farmer or gardener. Give some mark by which you know *two* of these weeds.

8 Describe and make a drawing of *one* of the following: dandelion, white daisy, Canada thistle.

9 Name *three* grains grown in your school district, or *two* grasses that you know, and tell the use of *one* of these plants.

10 How does a moth differ from a butterfly?

11 Describe the eggs of the tent caterpillar; tell where these eggs are found and why they should be destroyed.

12 Name *five* trees growing in your district that you know. Tell how you know *one* of these trees.

13 Name *three* varieties of apples that you know, and *two* other fruits that you know by sight.

June — 1914

1 How many types or kinds of combs have domestic fowls? Name *two* of these types.

2 Name *three* birds useful to the farmer or gardener and tell why they are useful.

3 Tell which of the following animals you know at sight: sheep, deer, squirrel, goat, woodchuck, fox, skunk, rabbit, frog, bat.

4 Describe the earthworn or angleworm as to form, length, mouth, food, use to farmers.

5 Name *one* clover, *two* grains and *three* common weeds that you know by sight.

6 Tell which of the following trees you know by sight: horse-chestnut, pine, apple, walnut, maple, oak, elm, poplar, dogwood, hemlock. Describe *one* of them as to size, bark and leaf.

7 What is the great enemy of elm trees? What can be done to protect the elm trees from this enemy?

8 Name *two* types of cattle. For what is each type best adapted?

9 Why are some plants called weeds?

10 Name *five* insects that you know by sight.

January — 1914

1 *a* Name *two* winter birds you have seen this year.

b Describe, as to size, color, and shape of bill, *one* of the birds named in answer to *a*.

2 Name *two* breeds of fowls that you know by sight and describe the comb of each breed named.

3 Name *three* enemies of young chickens from which they should be protected. How may they be best protected from the enemies named?

4 a Name *three* domestic animals with which you are familiar.

b Describe, as to size, food and use, *two* of the animals named in answer to *a*.

5 *a* How does the earthworm or angleworm move about?

b Describe the home or burrow of the earthworm or angleworm.

6 Give the three points in which the beef type of cattle differs from the milk type.

7 *a* State which of the following plants you know by sight:

pumpkin	daisy	timothy
celery	turnip	dandelion
nasturtium	white clover	wild carrot
Canada thistle	chickweed	ragweed
purslane	oats	burdock

b Which of the plants named in *a* are commonly known as weeds?

8 *a* Name *three* plants that are grown for haymaking.

b Describe *one* of the plants named in answer to *a*.

9 *a* On what kind of soil do oats grow best?

b Describe the oat plant when ready to be harvested.

10 Which of the following insects do you know by sight: wasp, lady beetle, ant, honeybee, dragon fly?

11 *a* Where do mosquitoes breed?

b How may the breeding of mosquitoes be prevented?

12 *a* What insect have you studied this year?

b Describe, as to size, number of wings and legs, structure of feet, food and habits, the insect you have named in answer to *a*.

13 Describe *either* the leaves *or* the bark of any *two* of the following trees that you know by sight: locust, oak, pine, peach, dogwood, plum.

14 *a* Describe by diagram or in words, the leaf of the common elm.

b Describe an elm seed or a maple seed.

15 *a* What is the elm leaf beetle, and how is it harmful?

b What means can be used to protect the elm from the elm leaf beetle?

16 How may the age of a tree be determined? Why?

June — 1913

1 Name *three* varieties of hens that you have seen or about which you have studied and give *two* leading characteristics of one of these varieties.

2 Give the names of *five* birds that you know by sight and describe *one* of them.

3 Of what use is the nuthatch to the farmer or the fruit grower?

4 Name *five* domestic animals that you know by sight

and describe *one* of them as to color, size, food, habits and use.

5 How many incisors or front teeth has a cow?

6 How should cows kept for dairy purposes be fed and cared for?

7 Tell which of the following named plants you have seen this term, and describe *one* of them as to (*a*) size, (*b*) shape of leaf, (*c*) form and color of flower, (*d*) use:

anemone	partridge berry	trillium
cherry	marsh marigold	turnip
daisy (white)	pitcher plant	
daisy (yellow)	squash	

8 *a* How are potatoes prepared for planting?

b Describe the potato blossom as to form and color.

9 What plants are grown for hay?

10 Where do potato beetles usually lay their eggs? Have you ever looked for and found any of these bunches of eggs?

11 *a* Mention two ways in which a spider differs from an ant.

b Is a spider properly an insect?

12 How does the farmer protect his potato crop from the potato beetle?

13 Name *five* trees found in your school district that you know by sight. Describe *one* of them as to (*a*) size, (*b*) shape of leaf, (*c*) appearance of bark, (*d*) use.

14 Describe the leaf of *one* of the following-named trees, and illustrate by a diagram: chestnut, horse-chestnut, maple, oak, poplar.

15 What are some of the ways in which forests are destroyed and wood needlessly wasted?

January — 1913

1 Tell which of the following birds you know by sight and describe *one* of them as to size, color, feet and bill: bobolink, chickadee, crow, goldfinch, meadow lark, oriole, peacock, robin.

2 Describe how the nuthatch secures its food.

3 How is the hen able to digest her food without teeth?

4 Describe *two* marked differences between dairy breeds and beef breeds of cattle.

5 Tell which of the following animals you know by sight and describe *one* of them as to its size and color and the

character of its feet: bat, donkey, goat, mouse, squirrel, toad, turtle, woodchuck.

6 Should the raising of cats be encouraged?

7 Tell which of the following weeds you know by sight and describe *one* of them as to root, leaf, flower and seed: bindweed, dandelion, pigweed, purslane, thistle, wild carrot.

8 How are potatoes prepared for planting?

9 Describe a head of clover, as to color, size and shape. Illustrate by a drawing.

10 Name the class of insects, gnawing or sucking, to which the following insects belong: potato beetle, tent caterpillar, cutworm.

11 Describe the lady beetle as to size, color and markings of body.

12 How may the potato farmer protect his crop from injury by the potato beetle?

13 Tell quite fully how a tree should be transplanted.

14 What varieties of fruit trees are grown in your school district?

15 What enemies has the locust tree? How do they injure the tree?

December — 1912

1 Describe *one* of the following as to size, color, bill and feet: (*a*) the nuthatch, (*b*) the hen.

2 Why is the nuthatch so called?

3 Which of the following birds do you know by sight: barn swallow, brown thresher, downy woodpecker, owl, peacock, phoebe, robin, turkey? Describe *one* of these birds.

4 Name *two* breeds of dairy cattle and *two* breeds of beef cattle.

5 Which of the following animals do you know by sight: deer, fox, frog, goat, muskrat, rabbit, rat, skunk? Describe *one* of these animals.

6 Describe the teeth and the feet of a cat.

7 Name *five* plants that you know by sight and describe *one* of them, as to root, leaf, flower and seed.

8 Name a grass, a grain, and a clover that you know by sight and describe *one* of them as to leaf and seed.

9 Name *three* things that may injure the potato crop and tell how injury from *one* of these things may be avoided.

10 Which of the following insects do you know by sight:

ant, cricket, honeybee, lady beetle, spider? Describe *one* of these insects as to color, eyes, and parts of body, and tell whether the insect is useful or injurious.

11 Describe the potato beetle, and briefly give its life history.

12 Name some of the natural enemies of the potato beetle that are of assistance to the farmer.

13 Which of the following named trees do you know by sight: cherry, elm, hemlock, horse-chestnut, locust, maple, peach, pear, poplar? Describe the leaves of *three* of these trees.

14 How may the age of a tree be determined? Explain.

15 How do the leaves of the pine differ from those of the maple? Illustrate by a drawing.

June — 1912

1 Write a brief description of the bird that you have been studying this term, covering the following points: size, color, shape, adaptation of bill and feet, kinds of food.

2 Name *two* winter birds and *three* summer birds that you know by sight.

3 What is a bird calendar and how is it made?

4 Write on the life of the toad.

5 How is the toad useful to the farmer?

6 How does the cow bite, chew and digest food?

7 Name the three parts of a plant and give the use of each part.

8 Describe the germination of the bean.

9 Why are some plants called weeds? The same plant may sometimes be a weed and sometimes not; give an example.

10 Write on the following topic: The Home and the Home Life of the Ant.

11 Describe briefly the insect that you have studied this term. Is this insect helpful or harmful? Give a reason for your answer.

12 *a* Name *three* of the following insects that you know by sight, and give the distinguishing characteristics by which you know *two* of them: wasp, hornet, cricket, grasshopper, dragon fly, honeybee, cutworm, potato beetle.

b Name the three characteristic parts of the honeybee.

c How many legs has the bee?

13 Describe the apple tree as to root, trunk, buds, blossoms and fruit.

14 Tell which of the following trees you know by sight and name the distinguishing characteristics of *two* of them: hemlock, apple, beech, locust, chestnut, pine, plum, elm, birch, cedar.

15 How may the age of a maple tree be determined.

January — 1912

1 Name the bird indicated for special study this year.

2 How may birds be attracted to the trees about the schoolhouse or the home?

3 Describe some hen that you have seen, giving size, color and the appearance of the head and the tail.

4 Name the animal indicated for special study this year.

5 How do you know a frog from a toad?

6 What is peculiar about the drinking and the breathing of toads?

7 What plant have you studied this year? Write a brief description of this plant.

8 Select *five* of the following plants and weeds that you know at sight:

dandelion	tomato	chickweed
lily	verbena	poppy
cabbage	tulip	beet
buttercup	violet	wild carrot
clover	wheat	timothy

9 Of what *three* parts does a plant consist?

10 What insect have you studied this year? Describe this insect briefly and tell where it may be found.

11 Name *four* of the following insects that you know by sight:

ant	potato beetle
cricket	hornet
Luna moth	grasshopper
honeybee	monarch butterfly

12 How do you tell a butterfly from a moth?

13 Name the tree indicated for special study this year.

14 What are the principal parts of a tree?

15 Name (*a*) *two* trees that are grown for their fruit, (*b*) *three* trees that are grown for lumber.

December — 1911

1 Name the bird that you have had for special study in school this year.

2 Which of the following birds do you know at sight: owl, robin, hawk, crow, turkey, bluebird, chickadee, woodpecker, barn swallow, red-winged blackbird?

3 From the above list select *two* birds that live in door-yards and *three* that live in the woods and thickets.

4 Name the animal that you have had for special study in school this year.

5 Why should toads be protected and not frightened away from gardens?

6 What is the principal food of toads and where do they find it?

7 What plant have you studied this year? Write a brief description of the plant that you name.

8 Select *five* of the following plants and weeds that you know at sight:

dandelion	tomato	chickweed
lily	verbena	poppy
cabbage	tulip	beet
buttercup	violet	wild carrot
clover	wheat	timothy

9 What is a weed? Which of the plants named in question 8 are weeds?

10 What insect have you studied this year? Describe this insect briefly and tell where it may be found.

11 Select *four* of the following insects that you know at sight:

ant	honey bee
hornet	grasshopper
cricket	potato beetle
Luna moth	monarch butterfly

12 Name the three parts of an insect.

13 Name the tree that you have had for special study in school this year.

14 How do you tell a pine tree from a spruce? *Or*
How do you tell an apple tree from a pear tree?

15 What varieties of apples are cultivated in your school district?

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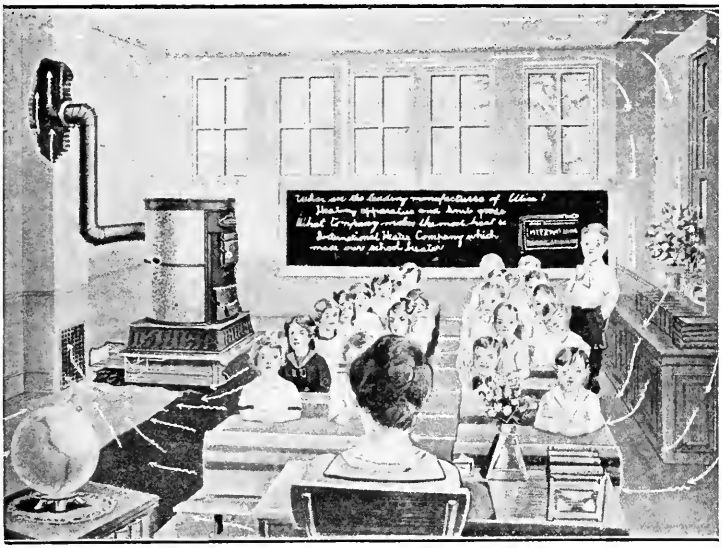

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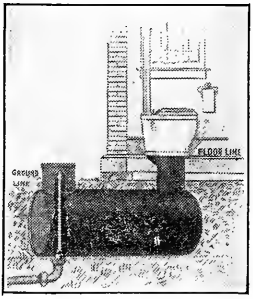

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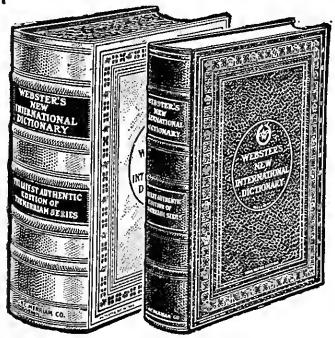

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